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ABSTRACT

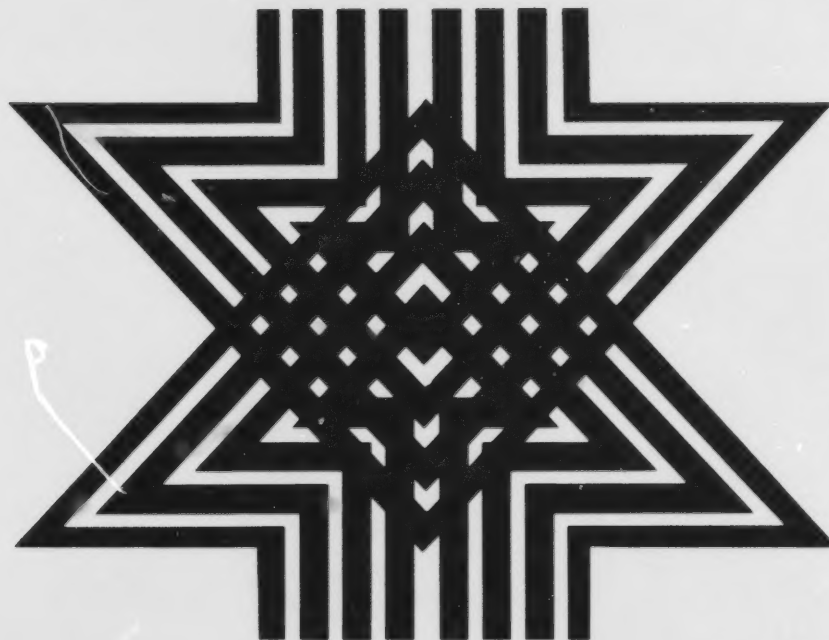
In 1977 approximately 17% of Minnesota's population aged 16 and over (478,000 people) felt that they definitely needed more job-related training in the next year. Another 9% felt that they perhaps needed more training. Of those indicating training interest, 40% were interested enough to pay a non-refundable course fee; 85% were willing to read information about available programs. Most frequent reasons for wanting more training were to do better at or remain qualified for a present job (30%), prepare for a job unrelated to the present or past job (26%), and prepare for a job advancement (20%). Preferred modes to receive instruction were in-school (48%) and on-the-job (42%). Most frequent factors likely to keep persons from enrolling in job training were the following: work takes too much time, program costs, family obligations, and lack of program information. Most frequently cited occupational choices for more training were professional/technical (25%), craft (12%), clerical (11%), managerial/administrative (9%), and service (8%). Of those indicating "yes" or "maybe" to the question for more training, 40% were 16-25 years old; about half were females and half were males. Concerning knowledge and attitude, 90% knew that vocational education's purpose was job training, and two-thirds held a positive attitude toward vocational education. (Also surveyed was the need for hobby/special interest education.) (Author/CSS)

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Demand for Additional 'Job-Related Training'

**By Minnesota Residents
Age 16 and Over , 1977**



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and
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December, 1978

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Vocational Education
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U.S. DEPARTMENT OF HEALTH,
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PREFACE

The material in this report is based on findings from the Minnesota Household Survey, a statewide survey conducted in April, 1977. This survey was designed to provide current information on a broad range of demographic and labor force characteristics of the Minnesota population. It was conducted cooperatively because of the common needs and interests of several participants: The Office of State Demographer in the State Planning Agency, the Division of Vocational-Technical Education in the Department of Education, the Office of Statewide CETA Coordination in the Department of Economic Security, and the Environmental Quality Board's Copper-Nickel Project. The principal aims of the survey were:

1. Obtain an updated set of characteristics of the population of Minnesota. The last full set of characteristics is from the 1970 Census.
2. Learn more about people's perceptions of their needs for job training, in order to help plan for vocational education.
3. Obtain more information about the labor force, in order to assess employment and unemployment issues facing Minnesota.
4. Develop an updated set of characteristics for the East Range (from Virginia to Ely), in order to meet the state's commitment to assess the impact of potential copper-nickel mining in northeast Minnesota.

The survey consisted of a statewide sample of approximately 4,530 households. Sample results have been expanded to agree with independent estimates of the population. There are sufficient cases to develop estimates of general demographic characteristics for the state, Region 11 and the balance of the state.

As in all sample surveys, the data in this report are subject to sampling variability and errors of response, including under-reporting and non-reporting. A detailed explanation appears in Appendix II.

ABSTRACT

Approximately 17 percent of the population of Minnesota, age 16 and over, felt they definitely needed more job-related training in the next year; 17 percent translates into 478,000 people in the year 1977. Another 9 percent or estimate 257,000 people in 1977, felt they maybe need more job-related training. This response was reported even though some of these people were currently attending job-related training.

Of those indicating yes or maybe to the question of more job-related training, 40 percent were interested enough to pay a non-refundable fee to reserve a place in a course; 85 percent were willing to read specific information about available programs. Most frequent reasons for wanting more job-related training were to do better at or remain qualified for a present job (30%), prepare for a job which is unrelated to a job had at present or in the past (26%), and prepare for a job promotion or advancement (20%). Preferred modes to receive instruction were in-school (48%) and on-the-job (42%). Most frequent factors likely to keep persons from enrolling in job-related training in the next 12 months were work takes too much time (25%), cost of program (14%), family obligations (11%), and lack of information about programs (10%). Occupational categories with highest frequency of choice for more training were professional/technical (25%), craft workers (12%), clerical workers (11%), managers/administrators (9%) and service workers (8%).

Of those indicating yes or maybe to the question of more job-training, 40 percent were 16-25 years of age. About an equal proportion were females and males. Concerning their knowledge and attitude, 90 percent knew that the purpose of vocational education was training for a job or work and two-thirds held a positive attitude toward vocational education.

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Chapter I

CONTEXT AND PURPOSE

"In the next twelve months, do you want or plan to take more job-related training?" This report focuses on responses to this question by Minnesota's residents who are age 16 and over. The characteristics of those who respond positively and negatively are compared. Desired features in an educational program designed to provide job-related training are summarized.

Planners and implementers of educational services face questions of what, how, when, and where to provide services. At the post-secondary and adult levels of education programs, participation is not compulsory; the consumer is free to decide whether to participate or not. In this context, information on consumer needs seems essential if an educational service is to be responsive and accessible.

The purpose of this study is to provide a set of information concerning perceived need for additional job training beyond high school by the population of Minnesota, age 16 and over. The major questions to be answered are as follows:

1. What are the characteristics of the people needing job-related training (e.g., age, sex, present occupation, handicapped)?
2. How many need more training?
3. Why is training needed (e.g., prepare for first job, promotion, re-entry)?
4. What type of training is needed (e.g., for what occupation, and more specifically, in what industry)?
5. When could training be attended?
6. Where could training be attended?
7. What are special barriers to attendance?
8. For those indicating a need for more job training, what is the level of need?
9. What attitude exists toward vocational education?

Although job-related training is the target of the report, some information is provided about self-perceived need for education related to hobbies and other areas of special interest. This report represents a further extension and application of earlier work by the Minnesota Research

and Development Center on assessing need for vocational education.^{1,2,3}

SPONSOR AND RESPONSIBILITIES

This study was jointly sponsored by the Minnesota State Department of Education, Division of Vocational-Technical Education; the Minnesota State Planning Agency, Office of State Demographer; Minnesota Department of Economic Security, Office of Statewide CETA Coordination; and the Copper-Nickel Study, a special study authorized by the Minnesota legislature. Each of these agencies pooled their resources to create the "critical mass" necessary to conduct a thorough study of Minnesota's population. The full study was entitled the "Minnesota Household Survey"; each agency contributed questions to be answered by the study.

The Office of the State Demographer was responsible for drawing the sample of respondents and collecting the data. The Minnesota Research and Development Center for Vocational Education developed the questions related to need for job-related training, had all questionnaires printed and transferred all data from the questionnaire to magnetic computer tapes. This report focuses only on responses to the questions related to need for additional job training and education for hobbies and special interests.

¹ Copa, G. H., Persons, E., and Thomas, F. Individual demand for vocational education: A structure and determination. Minneapolis: University of Minnesota, Minnesota Research Coordinating Unit for Vocational Education, 1973.

² Mueller, P., Copa, G. H., and Novak, K. Building the bridge: A study to assess Minneapolis residents' perceived needs for job training. Minneapolis: Minneapolis Public Schools and University of Minnesota, Minnesota Research Coordinating Unit for Vocational Education, 1974.

³ Copa, G. H., and Maurice, C. F. People's need for additional job training: development and evaluation of a procedure for assessment. Minneapolis: University of Minnesota, Minnesota Research Coordinating Unit for Vocational Education, 1976.

CONCEPT OF NEED

The word "need" is used in many ways and a review of these uses should provide a context within which to interpret the information in this report--both what it implies and does not imply. In discussing the concept of need, Bradshaw⁴ differentiates between normative need, felt need, comparative need, and expressed need. To identify a normative need, a desired standard is developed (e.g., everyone will have entry level job training) and what actually exists is compared to this standard. In the example given, if a person does not meet the standard (i.e., has entry level job training), they are characterized as being in need.

A felt need is equated with want, and in assessing if this need is present, respondents are asked whether or not they are in need of the commodity or service in question. Continuing with the above example, the respondents would be asked if they are in need of entry level job training; an affirmative response would identify them as being in need.

An expressed need is described by Bradshaw as being stronger than a felt need and is referred to as a demand (i.e., a felt need turned into action). Here, individuals who are in need request the commodity or service without being asked. For example, people with an expressed need would ask on their own to be admitted to entry level job training programs.

Comparative needs are identified by studying the characteristics of those who are in receipt of a commodity or service. It is assumed here that if non-recipients of the commodity or service have characteristics similar to those receiving the commodity or service, these non-recipients are also in need. Bradshaw implies that a detailed study of the people who are recipients of a service (e.g., entry level job training) can facilitate prediction of persons who may be in need of that service. In considering these four types of needs, it should be obvious that they may not be mutually exclusive with respect to persons classified; that is, persons identified as being in need from a normative perspective may also perceive, themselves, as being in need.

⁴Bradshaw, J. The concept of social need. New Society, 1972, 30, 640-43.

Complicating the concept of need still further, Thayer⁵ differentiates between diagnostic and prescriptive needs by contending that a diagnostic need relates to the identification of a problem while prescriptive needs relate to problem solution. Hence, each of the needs identified by Bradshaw may be either diagnostic or prescriptive. Using felt need and the problem area of job entry training as an illustration, a diagnostic, felt need would be evident if a person responded affirmatively to the question, "Are you having difficulty entering a job?" In contrast, a prescriptive, felt need would be evident by an affirmative response to the question, "Would you benefit from job-entry training?" In the former question a problem is identified, while in the latter a solution is identified.

Given this discussion, the information provided in this report was in response to felt needs of a prescriptive nature. The respondents were asked, "In the next twelve months, do you want or plan to take more job-related training?" As such, the information is based on the respondent's self-perception of solutions to their problems relating to job training. In essence, the respondent is deciding if they have a problem relating to job training and determining that job training is the solution to the problem. Respondents are setting their own standards for what is adequate job training and self-assessing whether or not the standard is being met.

Felt need was selected as the appropriate concept of need to use in this study because the focus was on the consumer of educational services and his perception of needs or wants. Little information was available to implement a normative or comparative concept of need. Some information on expressed need was already available through admission requests for existing education services. Using the concept of felt need would provide information about a more extensive group of potential consumers compared to using expressed need, particularly concerning consumers of services not presently available, or available but not accessible. Reliance on a prescriptive notion of need was judged to be appropriate on the assumption that since the respondents were age 16 or over, they should be mature and knowledgeable enough to decide on solutions to problems they may have related to job-

⁵Thayer, R. Measuring need in social sciences. Social and Economic Administration, 1973, 7, 91-105.

related training. Background information gathered during the survey was designed to allow development of and contrast with other concepts of need.

CONCEPT OF "JOB-RELATED TRAINING"

The concept of job-related training used in this study broadly interpreted a "job" to include both activities which are immediately income producing (i.e., paid employment) and more liberally, activities which are indirectly income saving (e.g., home-making, do-it-yourself activities).^{6,7} Indirect income saving activities are income saving in that if they were not done by the person in question someone else would have to be hired at a direct cost to perform the activities.

Felt need for the more traditional aspect of job-related training was ascertained by the question, "In the next twelve months, do you want or plan to take more job-related training?" In order to get an estimate of felt need for additional aspects of "job" related training, respondents were asked, "Do you want more education for hobbies or special interests...?" This latter question was followed by a question related to reasons why more education was felt to be needed; the reasons included better use of your leisure time, save money by doing things yourself, general improvement, and other reasons. Certainly not all of the educational services elicited as being in demand through this latter question are related to the proposed concept of "job"; however, use of the concept would at least include educational services wanted for the reason to "save money by doing things yourself".

Consideration of both major questions (i.e., job-related training and education for hobbies and special interests) was intended to provide a more comprehensive indication of felt need for job-related training. Responses to both questions are therefore provided in this report.

⁶ Moss, Jerome, Jr., Smith, Brandon B., and Copa, George H. "A summary of rationale for education for work." Paper presented at the meeting of the American Educational Research Association, Chicago, 1972.

⁷ Special Task Force to the Secretary of Health, Education and Welfare. Work in America. Cambridge, Massachusetts: MIT Press, 1972.

Chapter II

PROCEDURE

A brief overview of major activities in the conduct of the study are reported in this chapter. More detailed information can be obtained from the Minnesota Research and Development Center for Vocational Education or the Office of the Minnesota State Demographer.⁸

SAMPLING

The sampling procedure was designed so that each household had an equal probability of being selected from the population. The design was modeled after the proven multi-stage area probability designs which have long been used by the U.S. Bureau of the Census. The sampling unit was a year round housing unit; these were sampled in stages by first selecting counties and then clusters of housing units within counties. The sample frame was developed by the Survey Research Center at the University of Michigan. Except for Economic Development Region 3 which was sampled at a heavier rate, the general sampling proportion was approximately 1 out of 300 housing units. Sample size was determined by considering desired accuracy, expected incidence of key variables, response rates, and financial resources available.

In the case of the questions related to additional job-related training, every person 16 years of age or older in the household was given an opportunity to respond. First a randomly selected person 16 years of age or older in the household was selected for personal interview. The remaining persons 16 years of age or older were asked to complete a written questionnaire which was collected at the time of the interview or was to be mailed in at a later time.

⁸Minnesota State Demographic Office. Minnesota labor force survey: description of study development and field implementation. St. Paul: Minnesota State Planning Agency, November, 1977.

QUESTIONNAIRE DEVELOPMENT

A set of questionnaires were used to translate the major questions posed in Chapter I into a form which would elicit information from respondents in the sample of households. The "Household" questionnaire was designed to gather characteristics of each sampled household such as location, number of members, their age, sex, employment status, education, and income. This questionnaire was completed by personally interviewing anyone in a sampled household who was 16 years of age or older.

The "Selected Respondent" questionnaire was designed to gather a much more detailed set of information by personal interview from one randomly selected persons 16 years of age or older in each sampled household. The questionnaire was the longest with some 150 questions and represented a pooling of questions from each of the sponsoring agencies; only one section related to need for additional job-related training. Other sections gather detailed information about education, employment, and income.

The third questionnaire, termed the "Job-Training Interest" questionnaire was designed to be "dropped off" in each sampled household and to be filled out by every member of the household, 16 years of age and older, other than the person who was interviewed for the "Selected Respondent" questionnaire. This questionnaire contained only some of the questions from that section of the "Selected Respondent" questionnaire which related to need for additional job-related training. Since the "Job Training Interest" questionnaire was to be filled out in written form by respondents, the format of questions had to be altered slightly from the "Selected Respondent" questionnaire which was in an interview format. The purpose of the "Job Training Interest" questionnaire was to increase the sample size of 16-24 year olds for questions related to need for job training, thereby making more detailed analyses possible. This questionnaire was completed while another selected member of the household was interviewed or was requested to be sent back later in the mail.

Considerations which were incorporated into design of questionnaires included clear wording, logical sequence and skip patterns for questions, provision for all possible responses, formatting to allow response

coding and keypunching directly from questionnaire and efficiency in terms of respondent time.

FIELD TESTING

Field testing of the interview questionnaires was conducted to check completeness of instructions, understanding and flow of questions, and the degree of cooperation by respondents. Several experienced interviewers were sent into various parts of the State to field test the questionnaires. Staff from the Minnesota Research and Development Center for Vocational Education and the Office of the State Demographer sometimes accompanied interviewers. Reactions from the experienced interviewers and agency staff members were used to revise questions and instructions. Field testing was done twice, two weeks apart, to allow re-testing of major revisions.

PREPARATION FOR DATA COLLECTION

The collection of data from approximately 4,500 households dispersed throughout the State was the responsibility of the Office of the State Demographer. The task involved recruiting and training staff, developing field support materials and establishing a management strategy for assigning staff to households, monitoring field operations and retrieving data from interviewers.

A consultant with extensive experience as a survey field supervisor was retained to develop a staffing strategy, recruit interviewers and prepare training materials. By the end of data collection, 144 persons were employed--114 interviewers, 13 crew leaders and 17 office staff.

Five types of support materials were developed to insure accurate collection of data. These were: (1) an interviewer's manual which covered the purpose of the survey, sampling procedures, objectives of each question and instructions related to field procedures such as call backs and time and expense reports; (2) a self study manual designed to introduce interviewers to their job and to acquaint them with the concepts, ques-

tionnaires and instructions for the survey; (3) a crew leader's manual which outlined the job of the crew leader and its relationship to quality control procedures; (4) a training manual covering all key aspects of conducting the survey such as interviewing rules, practice interviews, and introductory letters; and (5) a number of administrative forms for recording expense, time and progress of data collection.

The State was divided into 13 districts with a crew leader in charge of each. A two-day interviewer training workshop was conducted in each district.

DATA COLLECTION

Interviewing started April 6 and ended on April 30, 1977. Each of the interviewers had approximately 50 households to contact during this three week period. Throughout this time, the central field office kept in touch with crew leaders, who in turn were in contact with interviewers through semi-weekly time and progress reports, observation and review of completed questionnaires. Each interviewer was instructed to make at least three visits to a home to locate the desired respondent. If the respondent was not interviewed, the case was referred to the crew leader who continued to try to contact the respondent.

A relatively high response rate of 96 percent indicated the effort made by both the interviewers and crew leaders. The response rate for the "Job-Training Interest" questionnaire which was dropped off for later return was 76 percent.

EDITING AND CODING

Before keypunching data from the questionnaires, each questionnaire was visually edited and numerical codes were assigned to responses on several questions. For open-ended questions, the responses to these questions on all questionnaires were first listed, suitable categories developed and then responses were coded numerically using the developed categories. Numeric codes were also used to indicate when a response to a question was

missing and when a question was skipped because it was not appropriate.

Visual editing was started as soon as questionnaires began to arrive in the central field office. Staff persons from the Office of State Demographer supervised the review of each questionnaire to insure that it was complete and consistent with interviewer instructions. Errors which could not be corrected were sent back to interviewers for correction or re-interview if necessary.

Following the visual editing and coding process, the Minnesota Research and Development Center developed a computer program to machine edit the questionnaire as a final "screen" to insure thorough and consistent data editing. Here, checks were made on the range in response codes, appropriate question skipping, and consistency of responses between selected questions.

DATA ANALYSIS

Questionnaires were keypunched at the St. Paul Campus Computing Center at the University of Minnesota; and, following the machine editing, the resulting computer cards were transferred to magnetic tape for data storage and analysis. The magnetic tape was taken to the Survey Research Center at the University of Michigan where sampling errors were derived. The tape was then returned to the University of Minnesota for duplication for each of the sponsoring agencies. The data analysis which provided the results shown in this report was conducted at the St. Paul Campus Computing Center.

Chapter III

CHARACTERISTICS OF THOSE NEEDING MORE JOB-RELATED TRAINING

This chapter focuses on the demographic characteristics of those needing more job-related training. It is a response to the question, "What are people like who want more job-related training?" In order to better identify salient features, the characteristics of those needing and not needing training are presented for comparison.

REPORTING FORMAT

Table 1 describes the responses to the key question of the study, "In the next 12 months, do you want or plan to take more job-related training?" Potential responses were "yes", "maybe" and "no"; the percent of the total sample with each response was 17.3, 9.3, and 73.5, respectively. The exact format of the question is shown below the Table. In order to contrast those needing and not needing more training, the "yes" and "maybe" responses were added together and labeled "total positive". The rationale for adding these two was the interpretation that a "maybe" response was an indication of willingness to entertain the notion of more job-related training and thereby a positive response, however weak. The "no" responses were labeled "total negative".

In addition to presenting percentages which are useful to compare the relative frequency of different responses to questions by one or more groups, population estimates are provided to highlight the number of people being characterized. Population estimates were developed by multiplying the percentages derived from the sample data times the estimated total number of people in the population represented by the sample. In this case, the population consisted of non-institutionalized Minnesota residents, age 16 years old and older; for 1977 the population was preliminarily estimated to be 2,769,000.⁹ While percentages may be small, when they are multiplied

⁹This is a preliminary estimate for 1977; a final official estimate will be made by the Minnesota State Demographer's Office.

times this large total population estimate, the resulting population estimate can still be sizeable. For example, as shown in Table 1, the 9.3 percent response of "maybe" from the sample becomes 257,000 people when translated into population terms. The percentage and population estimates shown in the tables in this report are rounded to the nearest tenth for percentage estimates and to the nearest thousand for population estimates. Because of rounding, rows and columns may not add to sub-totals and sub-totals may not add to totals.

Tables 2 to 13 all have a similar format; each combines responses to two questions. One of the questions, that shown in Table 1, concerns need for job-related training; this question is contained in all the tables. The other question relates to a selected demographic characteristic of the population (e.g., age, sex, income). For example, Table 2 shows a cross-tabulation of responses to the question of need for more job-related training and age categories of the respondents (e.g., 16-25 years, 26-35 years). The exact format of this second question is shown at the bottom of Table 2. In some cases, as in Table 2, responses were transformed into categories; where the table takes up the whole page, a footnote is used to refer to the respective question in the list of selected questions provided in Appendix I.

Column headings are used to represent responses to the need for job-related training question; row headings, which change from table to table, represent responses to questions relating to demographic characteristics. The intersection of each column and row category provides an information "cell" in which estimates are placed. There are, as discussed previously, two estimates, a percentage and a population estimate. The percentage refers to the proportion of population of Minnesota, 16 years old and older, who would give the response indicated by the column heading (e.g., yes, no, maybe) and have the characteristic noted by the row heading (e.g., age 16-25 years). The lower number in each cell is a population estimate of the number of people in Minnesota, age 16 and older, who would be expected to give responses characterized by the cell.

Where the number of responses from the sample was too small to make confident percentage and population estimates, a series of asterisks (***) was placed in the cells. If no responses were obtained from the sample

which fit a particular cell, a series of dashes (---) was used. Percentages were rounded to the nearest tenth and population estimates to the nearest thousand.

The sub-totals at the right of each table provide percentage and population estimates for responses to the demographic characteristic question (e.g., number of persons in Minnesota, age 26-35). They are derived by adding across the columns in a given row. The sub-totals at the bottom of the table provide percentage and population estimates for responses to the need for job-related training question. These sub-totals are derived by adding down the column; the sub-totals are identical for each of Tables 2-13. Because of rounding, rows and columns may not add to sub-totals.

Table 14 summarizes responses to the question, "Do you want more education for hobbies or special interests?" Approximately 44 percent of the population, age 16 and over, was estimated to be interested in education of this kind. Table 14 has a format similar to Table 1. Tables 15-21 present information about demographic characteristics of those needing and not needing more education for hobbies and special interests; table format is similar to Tables 2-13.

Since both the percentage and population estimates were based on a sample, they were subject to sampling error. The size of this error was based on the size of the sample relative to the population and on the proportion of the population fitting a particular category of interest. The error estimates associated with each table are shown in Appendix II.

Table 1. Need for Job-Related Training

Response to Need	Percentage Estimate	Population Estimate
Yes	17.3	478,000
Maybe	9.3	257,000
Total Positive	26.5	735,000
Total Negative	73.5	2,034,000
Total	100.0	2,769,000 ^a

^aThis is a preliminary estimate for 1977; a final official estimate will be made by the Minnesota State Demographer's Office.

Note: The percentage and population estimates shown in this and the following tables are rounded to the nearest tenth of a percentage for percentage estimates and nearest thousand for population estimates. Because of rounding, rows or columns may not add to sub-totals, and sub-totals may not add to totals. The "cut-off" point below which the percentage estimate and population estimate were too small to estimate accurately given the sample size was about 1 percent or 29,500.

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

In the next 12 months do you want or plan to take (more) job-related training?

- A. Yes.
- B. Maybe.
- C. No.

Table 2. Age and Need for Job-Related Training

Age (Years)	Need for Job-Related Training				Total
	Yes	Maybe	Total Positive	Total Negative	
16 - 25	7.1 196,000	3.6 99,000	10.7 295,000	14.1 390,000	24.7 685,000
26 - 35	5.0 140,000	2.4 68,000	7.5 208,000	12.6 348,000	20.1 556,000
36 - 45	2.6 72,000	1.5 41,000	4.1 114,000	9.8 272,000	13.9 386,000
46 - 70	2.5 70,000	1.7 47,000	4.2 117,000	28.1 779,000	32.4 896,000
Above 70	***	***	***	8.8 243,000	8.8 244,000
Not Reported/ Inapplicable	--	--	--	***	***
Total	17.3 478,000	9.3 257,000	26.5 735,000	73.5 2,034,000	100.0 2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Your age is: _____ Number of years.

Table 3. Gender and Need for Job-Related Training

Gender	Need for Job-Related Training				Total
	Yes	Maybe	Total Positive	Total Negative	
Male	8.7 240,000	4.2 116,000	12.8 355,000	34.7 961,000	47.5 1,316,000
Female	8.6 239,000	5.1 141,000	13.7 380,000	38.7 1,073,000	52.5 1,452,000
Total	17.3 478,000	9.3 257,000	26.5 735,000	73.5 2,034,000	100.0 2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Sex: _____

Table 4. Geographic Location and Need for Job-Related Training

Geographic Location (Economic Development Region)	Need for Job-Related Training				Total
	Yes	Maybe	Total Positive	Total Negative	
Region 11	9.6 267,000	4.9 137,000	14.6 404,000	32.3 894,000	46.9 1,298,000
Region 3	1.4 40,000	*** ***	2.3 64,000	7.5 207,000	9.8 271,000
All Other Regions	6.2 171,000	3.5 96,000	9.6 267,000	33.7 932,000	43.3 1,199,000
Total	17.3 478,000	9.3 257,000	26.5 735,000	73.5 2,034,000	100.0 2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Region: _____

Table 5. Household Income and Need for Job-Related Training

Household Income	Need for Job-Related Training				Total
	Yes	Maybe	Total Positive	Total Negative	
Less than \$5,000	1.0 28,000	*** ***	1.6 45,000	10.4 288,000	12.0 333,000
\$5,000-\$9,999	2.3 65,000	1.5 43,000	3.9 108,000	12.9 356,000	16.8 464,000
\$10,000-\$14,999	3.7 103,000	1.7 48,000	5.5 152,000	14.0 388,000	19.5 540,000
\$15,000-\$19,999	4.1 113,000	1.6 46,000	5.7 159,000	10.9 302,000	16.6 461,000
\$20,000-\$24,999	2.3 64,000	1.4 38,000	3.7 102,000	8.1 225,000	11.8 327,000
\$25,000-\$99,999	3.4 95,000	1.4 39,000	4.8 134,000	10.5 289,000	15.3 423,000
Not Reported/ Inapplicable	*** ***	*** ***	1.2 34,000	6.7 186,000	8.0 220,000
Total	17.3 478,000	9.3 257,000	26.5 735,000	73.5 2,034,000	100.0 2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Which category on this card represents the total income for this family in the past 12 months. This includes wages and salaries, net income from business or farm, pensions, dividends, interest, rent, social security payments, and other income received by members of this family. (Include related family members 14+ years.)

- A. Under \$3,000
- B. 3,000 - 3,999
- C. 4,000 - 4,999
- D. 5,000 - 5,999
- E. 6,000 - 6,999
- F. 7,000 - 7,999
- G. 8,000 - 8,999
- H. 10,000 - 12,499

- I. 12,500 - 14,999
- J. 15,000 - 17,499
- K. 17,500 - 19,999
- L. 20,000 - 24,999
- M. 25,000 - 29,999
- N. 30,000 - 39,999
- O. 40,000 - 49,999
- P. 50,000 and over

Table 6. Individual's Income and Need for Job-Related Training

Individual's Income	Need for Job-Related Training				Total
	Yes	Maybe	Total Positive	Total Negative	
Less than \$5,000	3.0 83,000	1.4 37,000	4.4 121,000	10.6 293,000	14.9 414,000
\$5,000-\$9,999	3.6 100,000	2.1 58,000	5.7 159,000	10.1 281,000	15.9 440,000
\$10,000-\$14,999	3.5 97,000	1.2 32,000	4.7 129,000	7.9 220,000	12.6 349,000
\$15,000-\$19,999	1.8 51,000	*** ***	2.1 59,000	4.7 129,000	6.8 188,000
\$20,000-\$24,999	*** ***	*** ***	*** ***	1.8 51,000	2.6 73,000
\$25,000-\$99,999	*** ***	*** ***	*** ***	1.1 31,000	1.9 52,000
Not Reported/ Inapplicable	4.7 129,000	3.3 92,000	8.0 221,000	37.3 1,033,000	45.3 1,254,000
Total	17.3 478,000	9.3 257,000	26.5 735,000	73.5 2,034,000	100.0 2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

See Question 5 in the questionnaire shown in Appendix I.

Table 7. Educational Attainment and Need for Job-Related Training

Educational Attainment	Need for Job-Related Training				Total
	Yes	Maybe	Total Positive	Total Negative	
No Formal Education	-- --	-- --	-- --	*** ***	*** ***
Some Elementary	*** ***	*** ***	*** ***	3.1 85,000	3.3 90,000
Completed Elementary	*** ***	*** ***	*** ***	11.1 306,000	11.7 324,000
Some High School	2.9 80,000	1.7 48,000	4.6 129,000	11.3 312,000	15.9 441,000
Completed High School	6.7 186,000	4.5 125,000	11.2 311,000	29.7 821,000	40.9 1,132,000
Some College	3.3 90,000	1.1 32,000	4.4 122,000	9.9 273,000	14.3 395,000
Completed College	2.9 81,000	*** ***	3.6 99,000	5.6 155,000	9.2 254,000
Grad. or Prof. School	1.6 45,000	*** ***	1.8 49,000	2.8 78,000	4.6 127,000
Not Reported/ Inapplicable	-- --	-- --	-- --	*** ***	*** ***
Total	17.3 478,000	9.3 257,000	26.5 735,000	73.5 2,034,000	100.0 2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

The highest grade you have completed is:

- A. None
- B. Some elementary (Grades 1-7)
- C. Completed elementary (Grade 8)
- D. Some high school (Grades 9-11)
- E. Completed high school (Grade 12)
- F. Some college (Grades 13-15)
- G. College completed (Grade 16)
- H. Graduate or professional school

Table 8. Recency of Last Training and Need for Job-Related Training

Recency of Last Training	Need for Job-Related Training				Total
	Yes	Maybe	Total Positive	Total Negative	
Less than 1 Year	5.9 163,000	1.9 53,000	7.8 216,000	4.9 136,000	12.7 352,000
1 Year	1.9 52,000	*** ***	2.4 67,000	2.5 70,000	4.9 137,000
2 Years	1.1 31,000	*** ***	1.5 42,000	1.7 47,000	3.2 89,000
3 Years	*** ***	*** ***	*** ***	1.2 33,000	2.0 54,000
4-6 Years	1.3 36,000	*** ***	2.2 60,000	4.1 113,000	6.3 174,000
7-10 Years	1.1 30,000	*** ***	1.6 46,000	4.1 113,000	5.7 159,000
More than 10 Years	1.5 40,000	*** ***	2.1 58,000	15.3 422,000	17.4 481,000
Not Reported/ Inapplicable	4.7 130,000	3.3 91,000	8.0 221,000	39.8 1,103,000	47.8 1,324,000
Total	17.3 478,000	9.3 257,000	26.5 735,000	73.5 2,034,000	100.0 2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Responses came from a series of questions related to training and education programs attended in the past. One of the questions was: When did you attend?

Table 9. Employment Status and Need for Job-Related Training

Employment Status	Need for Job-Related Training				Total
	Yes	Maybe	Total Positive	Total Negative	
Employed	14.5 400,000	6.2 170,000	20.6 570,000	42.1 1,165,000	62.7 1,736,000
Unemployed - Look for Work	1.2 32,000	*** ***	2.0 55,000	2.8 77,000	4.8 132,000
Not in Labor Force	2.3 62,000	1.6 45,000	3.9 107,000	28.7 794,000	32.5 901,000
Unknown	-- --	-- --	-- --	-- --	-- --
Total	17.3 478,000	9.3 257,000	26.5 735,000	73.5 2,034,000	100.0 2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

See Question 6 in the list of selected questions shown in Appendix I.

Table 10. Current Occupation and Need for Job-Related Training

Current Occupation	Need for Job-Related Training				Total Characteristics
	Yes	Maybe	Total Positive	Total Negative	
Professional/ Technical	3.9 109,000	*** ***	4.8 132,000	5.6 156,000	10.4 288,000
Managers/ Administrators	1.6 43,000	*** ***	2.1 56,000	3.9 109,000	6.0 165,000
Sales Workers	*** ***	*** ***	1.3 36,000	2.4 68,000	3.7 103,000
Clerical Workers	1.8 49,000	1.4 38,000	3.1 87,000	7.6 209,000	10.7 296,000
Craft Workers	1.5 43,000	*** ***	2.5 69,000	5.6 156,000	8.1 225,000
Operatives	1.3 35,000	*** ***	1.8 50,000	4.8 132,000	6.6 182,000
Laborers (Except Farm)	*** ***	*** ***	*** ***	1.6 43,000	2.5 70,000
Farmers/Farm Managers	*** ***	*** ***	*** ***	3.4 95,000	3.7 104,000
Farm Laborers, Foremen	*** ***	*** ***	*** ***	1.8 49,000	2.5 68,000
Service Workers	2.3 63,000	*** ***	3.2 88,000	5.5 153,000	8.7 241,000
Private House- hold Workers	*** ***	*** ***	*** ***	*** ***	*** ***
Not Specific	-- --	-- --	-- --	-- --	-- --
Do Not Know	-- --	-- --	-- --	-- --	-- --
Not Reported/ Inapplicable	3.2 89,000	2.3 64,000	5.5 153,000	30.8 851,000	36.3 1,005,000
Total	17.3 478,000	9.3 257,000	26.5 735,000	73.5 2,034,000	100.0 2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

See Question 10 and 11 in the list of selected questions shown in Appendix I.

Table 11. Current Industry and Need for Job-Related Training

Current Industry of Employment	Positive			Negative	Total
	Yes	Maybe	Total Positive	Total Negative	
Agriculture/Forestry/Fisheries	*** ***	*** ***	*** ***	5.6 156,000	6.7 185,000
Mining	*** ***	*** ***	*** ***	*** ***	*** ***
Construction	*** ***	*** ***	*** ***	2.4 67,000	3.3 92,000
Manufacturing	2.7 74,000	1.4 39,000	4.1 113,000	7.5 208,000	11.6 321,000
Trans./Comm./Public Utilities	*** ***	*** ***	*** ***	2.4 66,000	3.5 96,000
Wholesale/Retail Trade	3.1 86,000	1.3 38,000	4.5 124,000	9.3 257,000	13.8 381,000
Finance, Ins., Real Estate	*** ***	*** ***	1.3 35,000	1.9 52,000	3.2 87,000
Business and Repair Services	*** ***	*** ***	*** ***	1.3 35,000	1.9 53,000
Personal Services	*** ***	*** ***	*** ***	1.9 52,000	2.6 73,000
Entertainment/Rec. Services	4.5 123,000	*** ***	5.5 152,000	8.3 231,000	13.8 383,000
Public Administration	*** ***	*** ***	*** ***	1.8 49,000	2.8 77,000
Unknown	3.2 89,000	2.3 64,000	5.6 154,000	30.8 851,000	36.3 1,005,000
Total	17.3 478,000	9.3 257,000	26.5 735,000	73.5 2,034,000	100.0 2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

See Question 8 and 9 in the list of selected questions shown in Appendix I.

Table 12. Knowledge of Vocational Education and Need for Job-Related Training

Knowledge of Vocational Education	Need for Job-Related Training				Total
	Yes	Maybe	Total Positive	Total Negative	
Appropriate	15.9 439,000	7.5 207,000	23.3 646,000	62.5 1,730,000	85.8 2,375,000
Inappropriate	1.8 49,000	*** ***	2.6 71,000	6.2 173,000	8.8 244,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	4.8 134,000	5.4 150,000
Total	17.3 478,000	9.3 257,000	26.5 735,000	73.5 2,034,000	100.0 2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If a friend asked you to describe the purpose of vocational education, what would you say?

A. Training for a job or work.

B. Other (Specify) _____

Table 13. Attitude Toward Vocational Education and Need for Job-Related Training

Attitude Toward Vocational Education	Need for Job-Related Training				Total
	Yes	Maybe	Total Positive	Total Negative	
Very Positive	1.5 43,000	*** ***	2.0 55,000	2.4 66,000	4.4 122,000
Positive	10.5 291,000	5.0 139,000	15.5 430,000	34.5 954,000	50.0 1,384,000
Neutral	3.7 102,000	2.0 55,000	5.7 157,000	24.9 690,000	30.6 847,000
Negative	*** ***	-- --	*** ***	*** ***	*** ***
Very Negative	*** ***	-- --	*** ***	-- --	*** ***
Not Reported/ Inapplicable	2.0 56,000	1.1 31,000	3.1 87,000	11.4 316,000	14.5 403,000
Total	17.3 478,000	9.3 257,000	26.5 735,000	73.5 2,034,000	100.0 2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

See Question 35 in the list of selected questions shown in Appendix I.

Table 14. Need for Education for Hobbies and Special Interests

Interested	Percentage Estimate	Population Estimate
Positive	44.3	1,227,000
Negative	55.7	1,542,000
Total	100.0	2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Do you want more education for hobbies or special interests for any of the following reasons?

- A. Better use of your leisure time
- B. Save money by doing things yourself
- C. General self-improvement
- D. Other (Specify) _____
- E. Do not want more hobby or special interest education

Note: Responses A-D were considered to be positive responses.

Table 15. Age and Need for Education for Hobbies and Special Interests

Age (Years)	Interest in Education for Hobbies and Special Interests		Total
	Positive	Negative	
16 - 25	13.4 370,000	11.4 315,000	24.7 685,000
26 - 35	12.6 348,000	7.5 208,000	20.1 556,000
36 - 45	6.4 178,000	7.5 207,000	13.9 386,000
46 - 70	11.1 307,000	21.3 589,000	32.4 896,000
Above 70	*** ***	8.0 222,000	8.8 244,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***
Total	44.3 1,227,000	55.7 1,542,000	100.0 2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Your age is: _____ Number of years

Table 16. Gender and Need for Education for Hobbies and Special Interests

Gender	Interest in Education for Hobbies and Special Interests		Total
	Positive	Negative	
Male	18.6 516,000	28.9 801,000	47.5 1,316,000
Female	25.7 711,000	26.8 741,000	52.5 1,452,000
Total	44.3 1,227,000	55.7 1,542,000	100.0 2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Sex: _____

Table 17. Geographic Location and Need for Education for Hobbies and Special Interests

Economic Development Region	Interest in Education for Hobbies and Special Interests		Total
	Positive	Negative	
Region 11	22.9 635,000	24.0 663,000	46.9 1,298,000
Region 3	3.9 107,000	5.9 164,000	9.8 271,000
Balance of State	17.5 485,000	25.8 714,000	43.3 1,199,000
Total	44.3 1,227,000	55.7 1,542,000	100.0 2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Region: _____

Table 18. Household Income and Need for Education for Hobbies and Special Interests

Household Income	Interest in Education for Hobbies and Special Interests		Total
	Positive	Negative	
Less than \$5,000	3.3 91,000	8.8 243,000	12. 333,000
\$5,000-\$9,999	7.2 199,000	9.6 265,000	16.8 464,000
\$10,000-\$14,999	10.4 288,000	9.1 252,000	19.5 540,000
\$15,000-\$19,999	9.2 255,000	7.4 206,000	16.6 461,000
\$20,000-\$24,999	6.6 182,000	5.2 145,000	11.8 327,000
\$25,000-\$99,999	9.7 267,000	5.6 156,000	15.3 423,000
Not Reported/ Inapplicable	2.7 76,000	5.2 144,000	8.0 220,000
Total	44.3 1,227,000	55.7 1,542,000	100.0 2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Which category on this card represents the total income for this family in the past 12 months. This includes wages and salaries, net income from business or farm, pensions, dividends, interest, rent, social security payments, and other income received by members of this family. (Include related family members 14+ years.)

- | | |
|--------------------|--------------------|
| A. Under \$3,000 | I. 12,500 - 14,999 |
| B. 3,000 - 3,999 | J. 15,000 - 17,499 |
| C. 4,000 - 4,999 | K. 17,500 - 19,999 |
| D. 5,000 - 5,999 | L. 20,000 - 24,999 |
| E. 6,000 - 6,999 | M. 25,000 - 29,999 |
| F. 7,000 - 7,999 | N. 30,000 - 39,999 |
| G. 8,000 - 8,999 | O. 40,000 - 49,999 |
| H. 10,000 - 12,499 | P. 50,000 and over |

Table 19. Individual's Income and Need for Education for Hobbies and Special Interest

Individual's Income	Interest in Education for Hobbies and Special Interests		Total
	Positive	Negative	
Less than \$5,000	9.1 251,000	5.9 163,000	14.9 414,000
\$5,000-\$9,999	8.9 246,000	7.0 194,000	15.9 440,000
\$10,000-\$14,999	7.3 202,000	5.3 146,000	12.6 349,000
\$15,000-\$19,999	3.9 108,000	2.9 81,000	6.8 188,000
\$20,000-\$24,999	1.3 37,000	1.3 36,000	2.6 73,000
\$25,000-\$99,999	*** ***	*** ***	1.9 52,000
Not Reported/ Inapplicable	17.7 491,000	27.6 764,000	45.3 1,254,000
Total	44.3 1,227,000	55.7 1,542,000	100.0 2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

See Question 5 in the questionnaire shown in Appendix I.

Table 20. Educational Attainment and Need for Education for Hobbies and Special Interests

Educational Attainment	Interest in Education for Hobbies and Special Interests		Total
	Positive	Negative	
No Formal Education	-- --	*** ***	*** ***
Some Elementary	*** ***	2.9 81,000	3.3 90,000
Completed Elementary	1.6 44,000	10.1 280,000	11.7 324,000
Some High School	7.8 215,000	8.2 226,000	15.9 441,000
Completed High School	20.7 572,000	20.2 560,000	40.9 1,132,000
Some College	9.4 261,000	4.8 134,000	14.3 395,000
Completed College	6.1 168,000	3.1 86,000	9.2 254,000
Grad. or Prof. School	3.2 89,000	1.4 38,000	4.6 127,000
Not Reported/ Inapplicable	-- --	*** ***	*** ***
Total	44.3 1,227,000	55.7 1,542,000	100.0 2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

The highest grade you have completed is:

- A. None
- B. Some elementary (Grades 1-7)
- C. Completed elementary (Grade 8)
- D. Some high school (Grades 9-11)
- E. Completed high school (Grade 12)
- F. Some college (Grades 13-15)
- G. College completed (Grade 16)
- H. Graduate or professional school

Table 21. Employment Status and Need for Education for Hobbies and Special Interests

Employment Status	Interest in Education for Hobbies and Special Interests		Total
	Positive	Negative	
Employed	34.8 963,000	27.9 773,000	62.7 1,736,000
Unemployed - Look for Work	2.6 73,000	2.1 59,000	4.8 132,000
Not in Labor Force	11.6 322,000	20.9 579,000	32.5 901,000
Not Reported/ Inapplicable	-- --	-- --	-- --
Total	44.3 1,227,000	55.7 1,542,000	100.0 2,769,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

See Question 6 in the list of selected questions shown in Appendix I.

SELECTED OBSERVATIONS

Following is a series of observations selected after reviewing the tables presented in this chapter. They are not intended to be exhaustive; rather, they were selected to provoke additional study of the information.

Characteristics of Those Needing More Job-Related Training

- Approximately 27 percent of the population of Minnesota, age 16 and over, felt they may need more job-related training; this amounted to about 735,000 people in 1977.
- Need for more job-related training decreased with age, ranging from about 43 percent in need of those at age 16-25 to about 13 percent of age 46-70.
- Need for males and females was approximately equal, 27 and 26 percent, respectively.
- Need was greater in the Minneapolis-St. Paul, seven county metropolitan area than in the balance of the State, about 31 percent as compared to 23 percent, respectively. In 1977, this amounted to about 404,000 and 331,000 people in the two areas, respectively.
- Need increased with income of household in which residing up to income of \$20,000 and then decreased slightly and stabilized, starting at about 13 percent for household income less than \$5,000, rising to 34 percent for incomes of \$15,000-\$20,000 and stabilizing at about 31 percent for incomes over \$20,000. The largest number of persons in need were in households with incomes of \$10,000-\$14,999 and \$15,000-\$19,999, being about 152,000 and 159,000 persons in 1977, respectively.
- A similar relationship between need and income was apparent for individual's income as was shown for household income. Percentage in need increased from about 29 percent for incomes of less than \$5,000 to 37 percent for incomes of \$10,000-\$14,999 and then declined to about 31 percent for incomes of \$15,000-\$19,999. In 1977, the largest number of people in need had individual incomes of \$5,000-\$9,999, about 159,000 people.

- Need decreased slightly with completion of high school and then increased with completion of college education, starting at about 29 percent for those with some high school and declining to 27 percent with completion of high school and then increasing to 39 percent with completion of college or graduate and professional school. The largest group of persons in need was those who have completed high school only, about 311,000 in 1977.
- Need decreased with length of time since last enrolled in job-related training, about 61 percent for those who were in training less than one year ago to 12 percent for those last in training more than 10 years ago. In 1977, the largest group in need, based on recency of training, was those in training less than one year ago, about 216,000 people.
- Need was higher for the unemployed who were looking for work, than the employed, about 42 and 33 percent, respectively; however, the largest group in need, by far, was the employed, about 570,000 in 1977. Need by those not in the labor force was much lower than those employed or unemployed who were looking for work, about 12 percent of those not in the labor force were in need.
- The occupational category of the largest group in need was professional and technical, about 132,000 in 1977; this category was followed by service workers and clerical workers, 88,000 and 87,000, respectively, in 1977.
- The industrial category containing the largest group in need was entertainment and recreation services with about 152,000; this category was followed by wholesale and retail with 124,000 and manufacturing with 113,000.
- Most of the population of Minnesota, age 16 and over, had an appropriate definition of vocational education, that is, that it concerns preparing people for work, about 86 percent. Across the population, age 16 and over, need for job-related training was about the same for those with appropriate and inappropriate definitions of the purpose of vocational education, about 27 and 29 percent, respectively.
- Most of the study population had a positive or neutral attitude toward vocational education, about 54 and 31 percent, respectively. Need

increased with more positive attitude toward vocational education, varying from about 18 percent for those with a neutral attitude to 83 percent for those with a very positive attitude. The largest group in need was those with a positive attitude, about 430,000 in 1977.

Characteristics of Those Needing More Education For Hobbies or Special Interests

- Self-perceived need for more education for hobbies and special interests was felt by about 44 percent of the population of Minnesota, age 16 and over. This amounted to about 1,227,000 people in 1977.
- Need first increased and then decreased with age, starting at about 54 percent at age 16-25, rising to 63 percent at age 26-35, and declining to 34 percent for age 46-70.
- Need was higher for females than males, about 49 percent compared to 39 percent.
- Need was higher in the Minneapolis-St. Paul, seven county metropolitan area than in the balance of the State, about 49 as compared to 40 percent. The number of people in need in the two areas was about equal, 635,000 and 592,000, respectively, in 1977.
- Need increased with income of household in which the person resided, ranging from about 27 percent for household incomes of less than \$5,000 to 63 percent for incomes of \$25,000 to \$99,000. The largest groups in need were in households of income \$10,000-\$14,999, \$15,000-\$19,999, and \$25,000-\$99,999 being at about 288,000, 255,000, and 267,000, respectively, in 1977.
- Need increased with individual's income from about 6 percent for those with incomes of less than \$5,000 to 51 percent with incomes of \$20,000-\$24,999. The largest groups of persons in need had incomes of less than \$5,000 and \$5,000-\$9,999, about 251,000 and 246,000, respectively, in 1977.
- Need increased with increased educational attainment, ranging from about 14 percent for those who completed elementary school only to 70 percent for those completing graduate or professional school. The largest group in need was those who completed high school only,

about 572,000 people in 1977.

- Need was equal for those employed and unemployed and looking for work at about 55 percent. Need was less for those not in the labor force, about 36 percent. The employed were the largest group in need, about 963,000 persons in 1977.

Chapter IV

DESIRED PROGRAM CHARACTERISTICS

The previous chapter was concerned with a comparison on selected demographic characteristics of individuals needing and those not needing more job-related training. This chapter addresses only the group of respondents who indicated a need for more job-related training, or a willingness to enroll in such training within the next twelve months. This need was ascertained by a response of "yes" or "maybe" to the question, "In the next 12 months, do you want or plan to take more job-related training?" Those responding "yes" or "maybe" were asked further questions about the characteristics of a training program which they would find most beneficial. The characteristics were those enumerated in Chapter I of this report and refer to reason for training, type of training, convenient time and place, cost, and barriers to attending.

REPORTING FORMAT

Each table is analyzed according to three demographic characteristics--age, sex and geographic area. Although these characteristics were described in the previous chapter, the first three tables of this chapter summarize the demographic information for the group of respondents with which this chapter is concerned--those responding positively. The table on age (Table 22) shows that the number of individuals needing additional job-related training decreases with age. In the age group 16-25, there were 295,000 individuals in need. This number decreased to 208,000 in the 26-35 year old age group, 114,000 in the 36-45 year year old group, and 117,000 in the 46-70 group. The number of males in need (355,000) was slightly less than the number of females (380,000) as shown in Table 23. Table 24 shows that Economic Development Region 11 - the Minneapolis-St. Paul, seven county metropolitan area - had a greater number of respondents in need (404,000) than Economic Development Region 3 (64,000) or all remaining regions (267,000). Economic Development Region 3 was placed in a separate category because of the interest of one of the sponsors of this

study; the special interest resulted in sufficient sample size so that separate estimates could be made for the Region.

Tables 25-43 in the chapter have a similar format. Each table summarizes information about one desired characteristic of the training program. For example, Table 25A summarizes information about "reason for needing job-related training" for various age groups. Table 25B provides similar information for each sex and geographic area. The table designations of "A" and "B" are consistent throughout this chapter; "A" tables show information for age groups and "B" tables show information for each sex and geographic area. The demographic characteristics (e.g., age, sex) provide the heading for the column categories while the desired characteristics of the training program provide headings for the row categories.

The intersection of each column and row category provide an information cell in which population estimates are placed. There are, as previously discussed, two estimates: a percentage estimate and a population estimate. In this chapter, the estimated percentage--the upper number in the cell--refers to a proportion of a proportion of the population of Minnesota, 16 years old and older, who would give the response indicated in the row category (e.g., reason: to prepare for a first job) and have the characteristic noted by the column category (e.g., age 16-25 or live in Economic Development Region 11). It is a proportion of a proportion because the percentage estimate refers to only that proportion of the population who were estimated to have a need for more job-related training (shown in Chapter III) who, in turn, were estimated to give various responses to questions concerning desired characteristics of training programs. The lower number in the cell is the population estimate of the number of people in Minnesota, age 16 and older, who would be expected to give the responses characterized by that cell. Population estimates were derived by multiplying the estimated percentage times the estimated total number of persons needing job-related training, which was 735,000 as shown in the lower right hand corner of Tables 25-43.

As indicated in the previous chapter, where the number of responses from the sample was too small to make confident estimates, a series of asterisks (***) was placed in the cells. If no responses were obtained from the sample to fit that particular cell, a series of dashes (---) was

used. Percentage estimates are rounded to the nearest tenth and population estimates to the nearest thousand.

The subtotals at the right side of each table provide percentage and population estimates for each category of training program characteristics (e.g., reason: prepare for a first job--percentage estimate, 9.3, population estimate, 68,000). These were derived by adding across the columns of a given row. The subtotals at the bottom of each table provide percentage and population estimates for each of the age, sex or geographic area categories. These subtotals were derived by adding across the rows of a given column and are identical from Tables 25 to 43. Because of rounding errors, columns and rows may not add exactly to subtotals.

Tables 44-46 summarize the "yes" responses to the question, "Do you want more education for hobbies or special interests?" for age, sex, and geographic area categories. Approximately 44 percent of the population, age 16 and over, was interested in education of this kind. Tables 44-46 have a format similar to Tables 22-24. Tables 47-78 present information about desired educational program characteristics for those needing more education for hobbies and special interests; table format is similar to Tables 25-43.

Since both percentage and population estimates were based on a sample, they were subject to sampling error. The size of this error was based on the size of the sample relative to the population and on the proportion of the sample fitting a particular category of interest. The error estimates associated with each table are shown in Appendix II.

Table 22. Age of Those Needing More Job-Related Training

Age Group (Years)	Percentage Estimate	Population Estimate
16-25	40.1	295,000
26-35	28.2	208,000
36-45	15.5	114,000
46-70	15.9	117,000
Above 70	***	***
Total	100.0	735,000

Note: The "cut-off" point below which the percentage estimate and population estimate were too small to estimate accurately given the sample size was about 4 percent or 29,500.

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Your age is: _____ Number of years

In the next 12 months do you want or plan to take (more) job-related training?

- A. Yes
- B. Maybe
- C. No

Table 23. Gender of Those Needing More Job-Related Training

Sex	Percentage Estimate	Population Estimate
Male	48.4	355,000
Female	51.6	380,000
Total	100.0	735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Sex: _____

In the next 12 months do you want or plan to take (more) job-related training?

- A. Yes
- B. Maybe
- C. No

Table 24. Geographic Location of Those
Needing More Job-Related Training

Geographic Area	Percentage Estimate	Population Estimate
Region 11	55.0	404,000
Region 3	8.7	64,000
All Other Regions	36.3	267,000
Total	100.0	735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Region: _____

In the next 12 months do you want or plan to take
(more) job-related training?

- A. Yes
- B. Maybe
- C. No

Table 25A. Reason Why More Job-Related Training is Needed

Reasons	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
Prepare for First Job	8.2 60,000	*** ***	*** ***	*** ***	-- --	9.3 68,000
Prepare for Unrelated Job	13.5 99,000	6.9 51,000	*** ***	*** ***	*** ***	26.3 193,000
Prepare for Re-Entry	*** ***	*** ***	*** ***	*** ***	*** ***	9.4 69,000
Prepare for Job Promotion	7.5 55,000	7.5 55,000	*** ***	*** ***	-- --	20.0 147,000
To Remain Qualified	5.4 40,000	10.4 77,000	6.9 51,000	6.9 51,000	*** ***	29.8 219,000
Other	*** ***	*** ***	*** ***	*** ***	-- --	*** ***
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	-- --	*** ***
TOTAL	40.1 295,000	28.2 208,000	15.5 114,000	15.9 117,000	*** ***	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Here is a list of reasons why some people plan or want to take job-related training. Which one best describes your reason for wanting or planning to take more job-related training in the next 12 months?

- A. Prepare for a first job
- B. Prepare for a job which is unrelated to a job you have or have had
- C. Prepare to re-enter a job similar to one you have had in the past
- D. Prepare for a job promotion or advancement
- E. Prepare to do better at or remain qualified for your present job
- F. Other (Specify) _____
- G. None of the above

Table 25B. Reason More Job-Related Training is Needed

Reasons	Sex		Region			Total
	Male	Female	Region 11	Region 3	All Others	
Prepare for First Job	4.0 29,000	5.3 39,000	*** ***	*** ***	4.4 32,000	9.3 68,000
Prepare for Unrelated Job	12.7 93,000	13.6 100,000	15.4 113,000	*** ***	8.8 64,000	26.3 192,000
Prepare for Re-Entry	*** ***	6.4 47,000	5.0 37,000	*** ***	*** ***	9.4 69,000
Prepare for Job Promotion	11.5 85,000	8.5 63,000	13.1 96,000	*** ***	5.6 41,000	20.0 147,000
To Remain Qualified	14.8 108,000	15.0 110,000	15.4 113,000	*** ***	11.9 87,000	29.8 219,000
Other	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
TOTAL	48.4 355,000	51.6 380,000	55.0 404,000	8.7 64,000	36.3 267,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Here is a list of reasons why some people plan or want to take job-related training. Which one best describes your reason for wanting or planning to take more job-related training in the next 12 months?

- A. Prepare for a first job
- B. Prepare for a job which is unrelated to a job you have or have had
- C. Prepare to re-enter a job similar to one you have had in the past
- D. Prepare for a job promotion or advancement
- E. Prepare to do better at or remain qualified for your present job
- F. Other (Specify) _____
- G. None of the above

Table 26A. Occupation for Which More Job-Related Training is Needed

Occupational Category	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
Professional/ Technical	11.5 85,000	7.1 52,000	*** ***	*** ***	-- --	25.4 187,000
Managers/ Administrators	*** ***	4.2 31,000	*** ***	*** ***	-- --	9.3 68,000
Sales Workers	*** ***	*** ***	*** ***	*** ***	*** ***	4.7 34,000
Clerical Workers	4.2 31,000	*** ***	*** ***	*** ***	-- --	10.7 79,000
Craft Workers	6.1 45,000	*** ***	*** ***	*** ***	-- --	12.2 90,000
Operatives	*** ***	*** ***	*** ***	*** ***	-- --	*** ***
Laborers	*** ***	*** ***	-- --	-- --	-- --	*** ***
Farmers/ Farm Managers	*** ***	*** ***	*** ***	*** ***	-- --	*** ***
Service Workers	*** ***	*** ***	*** ***	*** ***	-- --	7.7 56,000
Not Specific	*** ***	*** ***	*** ***	*** ***	-- --	*** ***
Do Not Know	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Not Reported/ Inapplicable	4.0 29,000	5.2 38,000	*** ***	4.3 31,000	*** ***	17.5 128,000
Total	40.1 295,000	28.2 208,000	15.5 114,000	15.9 117,000	*** ***	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

See Question 14 in the list of selected questions shown in Appendix I.

Table 26B. Occupation for Which More Job-Related Training is Needed

Occupational Category	Sex		Geographic Area			Total
	Male	Female	Region 11	Region 3	All Others	
Professional/ Technical	10.9 80,000	14.5 107,000	14.0 103,000	*** ***	9.0 66,000	25.4 187,000
Managers/ Administrators	6.0 44,000	*** ***	6.5 48,000	*** ***	*** ***	9.3 68,000
Sales Workers	*** ***	*** ***	*** ***	*** ***	*** ***	4.7 34,000
Clerical Workers	*** ***	10.0 73,000	6.5 48,000	*** ***	*** ***	10.7 79,000
Craft Workers	11.1 82,000	*** ***	6.2 45,000	*** ***	5.0 37,000	12.2 90,000
Operatives	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Laborers	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Farmers/ Farm Managers	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Service Workers	*** ***	6.2 45,000	4.4 32,000	*** ***	*** ***	7.7 56,000
Not Specific	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Do Not Know	*** ***	*** ***	*** ***	*** ***	*** ***	5.0 37,000
Not Reported/ Inapplicable	8.1 60,000	9.4 69,000	7.7 56,000	*** ***	8.1 59,000	17.5 128,000
Total	48.4 355,000	51.6 380,000	55.0 404,000	8.7 64,000	36.3 267,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

See Question 14 in the list of selected questions shown in Appendix I.

Table 27A. Industry for Which More Job-Related Training is Needed

Industrial Category	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
Agri./Forestry/ Fisheries	*** ***	*** ***	*** ***	*** ***	-- --	*** ***
Mining	*** ***	*** ***	*** ***	*** ***	-- --	*** ***
Construction	*** ***	*** ***	*** ***	*** ***	-- --	*** ***
Manufacturing	*** ***	*** ***	*** ***	*** ***	-- --	9.3 68,000
Trans./Comm./ Public Utilities	*** ***	*** ***	*** ***	*** ***	-- --	2.6 27,000
Wholesale/ Retail Trade	*** ***	*** ***	*** ***	*** ***	-- --	7.2 53,000
Finance, Ins., Real Estate	*** ***	*** ***	*** ***	*** ***	-- --	4.9 36,000
Bus. and Repair Services	*** ***	*** ***	*** ***	*** ***	-- --	*** ***
Personal Services	*** ***	*** ***	*** ***	*** ***	-- --	*** ***
Entertainment/ Rec. Services	8.6 63,000	6.3 47,000	*** ***	*** ***	-- --	21.7 159,000
Public Administration	*** ***	*** ***	*** ***	*** ***	-- --	3.7 27,000
Not Specific	4.1 30,000	*** ***	*** ***	*** ***	-- --	8.7 64,000
Do Not Know	*** ***	*** ***	*** ***	*** ***	-- --	4.1 30,000
Not Reported/ Inapplicable	6.9 51,000	6.9 51,000	4.5 33,000	5.5 41,000	*** ***	24.0 177,000
Total	40.1 295,000	28.2 208,000	15.5 114,000	15.9 117,000	*** ***	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

See Question 15 in the list of selected questions shown in Appendix I.

Table 27B. Industry for Which More Job-Related Training is Needed

Industrial Category	Sex		Geographic Area			Total
	Male	Female	Region 11	Region 3	All Others	
Agri./Forestry/ Fisheries	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Mining	*** ***		*** ***	*** ***	-- --	*** ***
Construction	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Manufacturing	6.5 48,000	*** ***	7.7 56,000	*** ***	*** ***	9.3 68,000
Trans./Comm./ Public Utilities	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Wholesale/ Retail Trade	4.0 30,000	*** ***	5.1 37,000	*** ***	4.1 30,000	7.2 53,000
Finance, Ins., Real Estate	*** ***	*** ***	*** ***	*** ***	*** ***	4.9 36,000
Bus. and Repair Services	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Personal Services	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Entertainment/ Rec. Services	5.0 37,000	16.6 122,000	12.7 92,000	*** ***	11.0 80,000	21.7 159,000
Public Administration	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Not Specific	*** ***	5.1 38,000	5.1 37,000	*** ***	*** ***	8.7 64,000
Do Not Know	*** ***	*** ***	4.1 30,000	*** ***	*** ***	4.1 30,000
Not Reported/ Inapplicable	11.6 85,000	12.4 91,000	7.9 58,000	*** ***	*** ***	24.0 177,000
Total	48.4 355,000	51.6 380,000	55.0 404,000	8.7 64,000	36.3 267,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

See Question 15 in the list of selected questions shown in Appendix I.

Table 28A. Degree of Interest in More Job-Related Training

Degree of Interest	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
Will Read Descriptive Information	34.7 255,000	24.6 181,000	14.2 104,000	11.8 87,000	*** ***	85.4 628,000
List Name as Potential Student	30.4 223,000	22.1 162,000	12.3 90,000	9.5 70,000	-- --	74.3 546,000
Attend Meeting to Help Plan	23.9 176,000	18.0 132,000	10.8 79,000	7.3 54,000	-- --	60.0 441,000
Recruit Others for Class	18.5 136,000	12.1 89,000	7.5 55,000	5.5 40,000	-- --	43.7 321,000
Pay Non-Refundable Fee Now	17.0 125,000	11.6 85,000	6.9 51,000	5.3 39,000	-- --	40.7 299,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

- A. Are you interested enough in more job-related training to look through and read specific information about available programs?
1. Yes 2. No
- B. Are you interested enough to list your name as a potential student?
1. Yes 2. No
- C. Are you interested enough to attend a meeting with other interested individuals to help plan a course or program?
1. Yes 2. No
- D. Are you interested enough to recruit others to enable the class to be offered?
1. Yes 2. No
- E. Are you interested enough to pay a \$5.00 non-refundable fee in order to hold a place for yourself in a course?
1. Yes 2. No

Table 28B. Degree of Interest in More Job-Related Training

Degree of Interest	Sex		Geographic Area			Total
	Male	Female	Region 11	Region 3	All Others	
Will Read Descriptive Information	42.2 310,000	43.2 317,000	50.3 370,000	5.7 42,000	29.4 216,000	85.4 628,000
List Name as Potential Student	37.2 274,000	37.1 273,000	44.0 323,000	5.1 37,000	25.2 185,000	74.3 546,000
Attend Meeting to Help Plan	30.1 221,000	29.9 220,000	33.9 249,000	4.6 34,000	21.5 158,000	60.0 441,000
Recruit Others for Class	21.7 159,000	22.0 162,000	22.7 167,000	*** ***	17.5 129,000	43.7 321,000
Pay Non-Refundable Fee Now	20.3 149,000	20.4 150,000	20.8 153,000	*** ***	16.5 121,000	40.7 299,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

- A. Are you interested enough in more job-related training to look through and read specific information about available programs?
1. Yes 2. No
- B. Are you interested enough to list your name as a potential student?
1. Yes 2. No
- C. Are you interested enough to attend a meeting with other interested individuals to help plan a course or program?
1. Yes 2. No
- D. Are you interested enough to recruit others to enable the class to be offered?
1. Yes 2. No
- E. Are you interested enough to pay a \$5.00 non-refundable fee in order to hold a place for yourself in a course?
1. Yes 2. No

Table 29A. How Soon in Next Year Willing to Enroll in More Job-Related Training

How Soon Willing to Enroll	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
0-2 Months	21.0 154,000	11.2 82,000	7.0 51,000	5.4 40,000	*** ***	44.7 329,000
3-5 Months	9.7 72,000	7.9 58,000	4.2 31,000	4.1 30,000	-- --	25.8 190,000
6-8 Months	6.3 46,000	7.2 53,000	4.0 29,000	*** ***	-- --	21.5 158,000
9-12 Months	*** ***	*** ***	*** ***	*** ***	-- --	5.2 38,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	-- --	*** ***
Total	40.1 295,000	28.2 208,000	15.5 114,000	15.9 117,000	*** ***	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If the job training program of your choice were available, how soon within the next 12 months would you want to enroll?

A. _____ Number of months.

Table 29B. How Soon in Next Year Willing to Enroll in More Job-Related Training

How Soon Willing to Enroll	Sex		Geographic Area			Total
	Male	Female	Region 11	Region 3	All Others	
0-2 Months	22.7 167,000	21.9 161,000	25.4 187,000	*** ***	16.5 121,000	44.7 329,000
3-5 Months	11.5 85,000	14.3 105,000	15.8 116,000	*** ***	7.6 56,000	25.8 190,000
6-8 Months	12.0 88,000	9.5 70,000	12.3 90,000	*** ***	7.9 58,000	21.5 158,000
9-12 Months	*** ***	*** ***	*** ***	*** ***	*** ***	5.2 38,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Total	48.4 355,000	51.6 380,000	55.0 404,000	8.7 64,000	36.3 267,000	100.0 735,000

QUESTION ELICITING REPONSES SHOWN IN TABLE ABOVE:

If the job training program of your choice were available, how soon within the next 12 months would you want to enroll?

A. _____ Number of months

Table 30A. Time of Year Convenient to Attend Job-Related Training

Season	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
Spring	19.7 144,000	13.1 96,000	6.8 50,000	6.9 51,000	*** ***	46.6 342,000
Summer	18.2 134,000	10.3 76,000	5.6 41,000	5.1 38,000	*** ***	39.4 290,000
Fall	24.8 182,000	17.2 127,000	9.8 72,000	8.4 62,000	*** ***	60.3 443,000
Winter	26.5 195,000	20.1 148,000	10.3 76,000	9.1 67,000	*** ***	66.2 486,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	--- ---	*** ***

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If you were to attend a job-related training program, which times of year would be convenient:

- A. Spring
- B. Summer
- C. Fall
- D. Winter

Table 30B. Time of Year Convenient to Attend Job-Related Training

Season	Sex		Geographic Area			Total
	Male	Female	Region 11	Region 3	All Others	
Spring	19.5 143,000	27.1 199,000	28.9 213,000	*** ***	13.9 102,000	46.6 342,000
Summer	17.9 132,000	21.5 158,000	22.1 163,000	*** ***	13.9 102,000	39.4 290,000
Fall	24.7 181,000	35.6 262,000	37.2 273,000	4.7 35,000	18.4 135,000	60.3 443,000
Winter	36.2 266,000	30.0 221,000	37.4 275,000	5.3 39,000	23.4 172,000	66.2 486,000
Not Reported/ Inapplicable	** ***	*** ***	*** ***	*** ***	*** ***	*** ***

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If you were to attend a job-related training program, which times of year would be convenient:

- A. Spring
- B. Summer
- C. Fall
- D. Winter

Table 31A. Days Per Week Could Attend Job-Related Training

Days/Week	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
1 Day	8.6 63,000	10.8 79,000	6.6 48,000	6.3 46,000	*** ***	32.2 237,000
2 - 4 Days	17.3 127,000	11.2 83,000	5.5 40,000	6.3 47,000	*** ***	40.5 297,000
More Than 4 Days	13.3 97,000	5.5 41,000	*** ***	*** ***	*** ***	24.0 177,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	-- --	*** ***
Total	40.1 295,000	28.2 208,000	15.5 114,000	15.9 117,000	*** ***	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If you were to attend a job-related training program, how many days per week could you devote to the program?

- A. 1 day a week
- B. 2-4 days a week
- C. 5 or more days a week

Table 31B. Days Per Week Could Attend Job-Related Training

Days/Week	Sex		Geographic Area			Total
	Male	Female	Region 11	Region 3	All Others	
1 Day	16.8 123,000	15.4 113,000	16.8 123,000	*** ***	12.5 92,000	32.2 237,000
2 - 4 Days	17.7 130,000	22.8 167,000	23.8 175,000	*** ***	13.4 99,000	40.5 297,000
More Than 4 Days	12.0 89,000	12.0 88,000	13.0 96,000	*** ***	8.9 66,000	24.0 177,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Total	48.4 355,000	51.6 380,000	55.0 404,000	8.7 64,000	36.3 267,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If you were to attend a job-related training program, how many days per week could you devote to the program?

- A. 1 day a week
- B. 2-4 days a week
- C. 5 or more days a week

Table 32A. Time of Week Convenient to Attend Job-Related Training

Time of Week	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
Days	19.7 145,000	10.4 76,000	6.8 50,000	7.2 53,000	*** ***	44.2 325,000
Nights	22.0 161,000	20.2 149,000	10.0 74,000	8.9 65,000	-- --	61.1 449,000
Weekends	6.9 50,000	5.3 39,000	*** ***	*** ***	-- --	15.9 117,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Would days, nights or weekends be convenient?

- A. Days
- B. Nights
- C. Weekends

Table 32B. Time of Week Convenient to Attend Job-Related Training

Time of Week	Sex		Geographic Area			Total
	Male	Female	Region 11	Region 3	All Others	
Days	17.8 131,000	26.5 195,000	23.2 171,000	4.0 29,000	17.1 125,000	44.2 325,000
Nights	32.1 236,000	29.0 213,000	35.1 258,000	5.0 37,000	21.0 155,000	61.1 449,000
Weekends	9.0 66,000	6.9 51,000	8.1 59,000	*** ***	6.5 48,000	15.9 117,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Would days, nights or weekends be convenient?

- A. Days
- B. Nights
- C. Weekends

Table 33A. Hours Per Day Could Attend Job-Related Training

Hours/Day	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
2 Hours	8.0 59,000	7.4 54,000	*** ***	4.2 31,000	*** ***	23.4 172,000
3 - 5 Hours	19.2 141,000	13.3 97,000	7.7 56,000	7.0 51,000	*** ***	47.1 346,000
More Than 5 Hours	12.1 89,000	7.1 52,000	*** ***	4.1 30,000	*** ***	27.0 198,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	-- --	*** ***
Total	40.1 295,000	28.2 208,000	15.5 114,000	15.9 117,000	*** ***	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

How many hours per day could you devote to the program?

- A. 2 hours or less
- B. 3-5 hours
- C. 6 hours or more

Table 33B. Hours Per Day Could Attend Job-Related Training

Hours/Day	Sex		Geographic Area			Total
	Male	Female	Region 11	Region 3	All Others	
2 Hours	11.3 83,000	12.1 99,000	13.0 96,000	*** ***	8.6 63,000	23.4 172,000
3 - 5 Hours	22.3 164,000	24.8 183,000	27.4 201,000	4.0 29,000	15.8 116,000	47.1 346,000
More Than 5 Hours	13.3 98,000	13.7 101,000	13.4 98,000	*** ***	11.0 80,000	27.0 198,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Total	48.4 355,000	51.6 380,000	55.0 404,000	8.7 64,000	36.3 267,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

How many hours per day could you devote to the program?

- A. 2 hours or less
- B. 3-5 hours
- C. 6 hours or more

Table 34A. Instructional Media Preferred for Job-Related Training

Instructional Media Preferred	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
In School	17.7 130,000	14.7 108,000	8.0 59,000	7.9 58,000	*** ***	48.5 356,000
On the Job	19.0 140,000	11.4 84,000	5.4 40,000	6.1	*** ***	42.0 309,000
Educational TV	*** ***	*** ***	*** ***	*** ***	-- --	*** ***
Radio	*** ***	-- --	*** ***	-- --	-- --	*** ***
Correspondence	*** ***	*** ***	*** ***	*** ***	-- --	4.2 31,000
Other	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	-- --	*** ***
Total	40.1 295,000	28.2 208,000	15.5 114,000	15.9 117,000	*** ***	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If you were to enroll in job-related training how would you prefer to receive instruction?

- A. In school
- B. On-the-job
- C. Educational television
- D. Radio
- E. Correspondence
- F. Other (Specify) _____

Table 34B. Instructional Media Preferred for Job-Related Training

Instructional Media Preferred	Sex		Geographic Area			Total
	Male	Female	Region 11	Region 3	All Others	
In School	23.3 130,000	25.2 108,000	27.9 59,000	*** ***	16.8	48.5 356,000
On the Job	20.2 140,000	21.8 84,000	21.9 40,000	4.1	16.0	42.0 309,000
Educational TV	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Radio	*** ***	-- --	*** ***	*** ***	*** ***	*** ***
Correspondence	*** ***	*** ***	*** ***	*** ***	*** ***	4.2 31,000
Other	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Total	48.4 355,000	51.6 380,000	55.0 404,000	8.7 64,000	36.3 267,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If you were to enroll in job-related training how would you prefer to receive instruction?

- A. In school
- B. On-the-job
- C. Educational television
- D. Radio
- E. Correspondence
- F. Other (Specify) _____

Table 35A. Hindrances to Enrolling in More Job-Related Training

Hindrances	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
Work Takes Too Much Time	8.2 61,000	8.7 64,000	4.4 32,000	4.1 30,000	-- --	25.5 187,000
Family Obligations	*** ***	4.9 36,000	*** ***	*** ***	-- --	10.9 80,000
Transportation Problems	*** ***	*** ***	*** ***	*** ***	*** ***	4.1 38,000
Lack of Information	*** ***	*** ***	*** ***	*** ***	-- --	10.4
Cost of Program	5.1 38,000	4.8 35,000	*** ***	*** ***	-- --	14.3 105,000
Other	-- --	-- --	-- --	-- --	-- --	-- --
Not Reported/ Inapplicable	25.8 190,000	13.1 97,000	8.3 61,000	9.5 70,000	*** ***	56.9 418,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Are any of the following reasons likely to keep you from enrolling in a job-related training program in the next 12 months:

- A. Work takes too much time (asked only if respondent was working)
- B. Family obligations
- C. Transportation problems
- D. Lack of information about programs
- E. Cost of program

Table 35B. Hindrances to Enrolling in More Job-Related Training

Hindrances	Sex		Geographic Area			Total
	Male	Female	Region 11	Region 3	All Others	
Work Takes Too Much Time	14.9 109,000	10.6 78,000	14.5 107,000	*** ***	8.7 64,000	25.5 187,000
Family Obligations	*** ***	7.7 56,000	6.9 51,000	*** ***	*** ***	10.9 80,000
Transportation Problems	*** ***	*** ***	*** ***	*** ***	*** ***	5.1 37,000
Lack of Information	4.9 36,000	5.5 40,000	6.9 51,000	*** ***	*** ***	10.4 76,000
Cost of Program	5.7 42,000	8.7 64,000	9.7 72,000	*** ***	*** ***	14.3 105,000
Other	-- --	-- --	-- --	-- --	-- --	-- --
Not Reported/ Inapplicable	27.5 200,000	29.4 214,000	28.6 208,000	5.6 40,000	22.7 166,000	56.9 418,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Are any of the following reasons likely to keep you from enrolling in a job-related training program in the next 12 months:

- A. Work takes too much time (asked only if respondent was working)
- B. Family obligations
- C. Transportation problems
- D. Lack of information about programs
- E. Cost of program

Table 36A. Willingness to Borrow Money to Attend Job-Related Training

Will Borrow Money	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
Yes	5.2 38,000	*** ***	*** ***	*** ***	-- --	9.2 68,000
No	*** ***	*** ***	*** ***	*** ***	-- --	7.7 57,000
Maybe	*** ***	*** ***	4.8 35,000	*** ***	-- --	13.3 98,000
Not Reported/ Inapplicable	27.8 204,000	20.1 148,000	10.5 77,000	*** ***	-- --	69.8 513,000
Total	295,000	208,000	114,000	117,000	***	735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Would you borrow money in order to be able to attend (asked only of respondents for whom cost was a hindrance)?

- A. Yes
- B. No
- C. Maybe

Table 36B. Willingness to Borrow Money to Attend Job-Related Training

Will Borrow Money	Sex		Geographic Area			Total
	Male	Female	Region 11	Region 3	All Others	
Yes	4.7 35,000	4.4 32,000	6.1 45,000	*** ***	*** ***	9.2 68,000
No	*** ***	4.2 31,000	8.1 60,000	*** ***	*** ***	7.7 57,000
Maybe	4.8 35,000	8.5 62,000	4.9 36,000	*** ***	*** ***	13.3 98,000
Not Reported/ Inapplicable	37.9 279,000	31.9 234,000	39.5 290,000	4.7 35,000	25.6 188,000	69.8 513,000
Total	355,000	380,000	404,000	64,000	267,000	735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Would you borrow money in order to be able to attend (asked only of respondents for whom cost was a hindrance)?

- A. Yes
- B. No
- C. Maybe

Table 37A. Willingness to Seek Part-Time Job to Attend Job-Related Training

Will Seek Part-Time Job	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
Yes	6.8	***	***	***	--	13.3
	50,000	***	***	***	--	98,000
No	***	***	***	***	--	4.2
	***	***	***	***	--	31,000
Maybe	***	***	***	***	--	12.5
	***	***	***	***	--	92,000
Not Reported/ Inapplicable	27.9	20.1	10.4	11.4	--	69.9
	205,000	148,000	76,000	84,000	--	514,000
Total	295,000	208,000	404,000	64,000	267,000	735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Would you seek a part-time job in order to be able to attend (asked only of respondents for whom cost was a hindrance)?

- A. Yes
- B. No
- C. Maybe

Table 37B. Willingness to Seek Part-Time Job to Attend Job-Related Training

Will Seek Part-Time Job	Sex		Geographic Area			Total
	Male	Female	Region 11	Region 3	All Others	
Yes	7.7 57,000	5.7 42,000	8.6 63,000	*** ***	*** ***	13.3 98,000
No	*** ***	*** ***	*** ***	*** ***	*** ***	4.2 31,000
Maybe	4.2 31,000	8.3 61,000	7.9 58,000	*** ***	*** ***	12.5 92,000
Not Reported/ Inapplicable	37.9 279,000	32.0 235,000	39.5 290,000	4.7 35,000	25.7 189,000	69.9 514,000
Total	355,000	380,000	404,000	64,000	267,000	735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Would you seek a part-time job in order to be able to attend (asked only of respondents for whom cost was a hindrance)?

- A. Yes
- B. No
- C. Maybe

Table 38A. Weekly Fees Able to Pay to Attend Full-Time Job-Related Training

Fees/Week	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
None	7.5 55,000	4.5 33,000	*** ***	*** ***	-- --	18.0 132,000
Less Than \$7.50	4.9 36,000	*** ***	*** ***	*** ***	-- --	12.5 92,000
\$7.50 - \$14.99	8.4 62,000	*** ***	*** ***	*** ***	-- --	17.1 126,000
\$15.00 - \$29.99	6.1 45,000	*** ***	*** ***	*** ***	-- --	14.8 109,000
\$30.00 - \$45.00	*** ***	*** ***	*** ***	*** ***	-- --	7.4 54,000
More Than \$45.00	*** ***	*** ***	*** ***	*** ***	-- --	6.4 47,000
Not Reported/ Inapplicable	8.1 60,000	8.6 63,000	*** ***	*** ***	*** ***	23.9 176,000
Total	40.1 295,000	28.2 208,000	15.5 114,000	15.9 117,000	*** ***	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If you were to attend a full-time training program in a public school -- one that took 30 hours a week, 5 days a week for several months -- how much tuition or fees would you be able to pay per week?

- A. None
- B. Less than \$7.50 per week
- C. \$7.50 to \$14.99 per week
- D. \$15.00 to \$29.99 per week
- E. \$30.00 to \$45.00 per week
- F. More than \$45.00 per week

Table 38B. Weekly Fees Able to Pay to Attend Full-Time Job-Related Training

Fees/Week	Sex		Geographic Area			Total
	Male	Female	Region 11	Region 3	All Others	
None	9.2 68,000	8.8 65,000	11.7 86,000	*** ***	5.0 37,000	18.0 132,000
Less Than \$7.50	4.3 32,000	8.1 60,000	6.7 49,000	*** ***	4.9 36,000	12.5 92,000
\$7.50 - \$14.99	7.5 55,000	9.6 71,000	8.6 63,000	*** ***	6.8 50,000	17.1 126,000
\$15.00 - \$29.99	8.5 62,000	6.3 46,000	8.5 62,000	*** ***	5.2 38,000	14.8 109,000
\$30.00 - \$45.00	4.7 35,000	*** ***	5.6 41,000	-- --	*** ***	7.4 54,000
More Than \$45.00	4.4 32,000	*** ***	*** ***	*** ***	*** ***	6.4 47,000
Not Reported/ Inapplicable	12.2 90,000	11.7 86,000	13.8 101,000	*** ***	8.4 62,000	23.8 176,000
Total	48.4 352,000	51.6 376,000	55.0 400,000	8.7 64,000	36.3 267,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If you were to attend a full-time training program in a public school -- one that took 30 hours a week, 5 days a week for several months -- how much tuition or fees would you be able to pay per week?

- A. None
- B. Less than \$7.50 per week
- C. \$7.50 to \$14.99 per week
- D. \$15.00 to \$29.99 per week
- E. \$30.00 to \$45.00 per week
- F. More than \$45.00 per week

Table 39A. Distance Able to Travel to Attend Full-Time Job-Related Training

Distance	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
1 - 10 Miles	11.2 82,000	5.4 40,000	5.5 40,000	4.9 36,000	-- --	27.0 198,000
11 - 20 Miles	9.4 69,000	6.8 50,000	*** ***	*** ***	-- --	22.6 166,000
21 - 30 Miles	6.3 46,000	*** ***	*** ***	*** ***	-- --	12.2 90,000
More Than 30 Miles	5.6 41,000	4.5 33,000	*** ***	*** ***	-- --	14.9 110,000
Not Reported/ Inapplicable	7.5 55,000	9.2 68,000	*** ***	*** ***	*** ***	23.3 171,000
Total	40.1 295,000	28.2 208,000	15.5 114,000	15.9 117,000	*** ***	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

How far would you be able to travel for a full-time program:

- A. 1-10 miles
- B. 11-20 miles
- C. 21-30 miles
- D. Over 30 miles

Table 39B. Distance Able to Travel to Attend Full-Time Job-Related Training

Distance	Sex		Geographic Area			Total
	Male	Female	Region 11	Region 3	All Others	
1 - 10 Miles	11.0 80,000	16.0 118,000	18.4 135,000	*** ***	7.0 51,000	27.0 198,000
11 - 20 Miles	12.8 94,000	9.8 72,000	15.1 111,000	*** ***	6.7 49,000	22.6 166,000
21 - 30 Miles	6.4 47,000	5.8 43,000	5.1 37,000	*** ***	5.9 43,000	12.2 90,000
More Than 30 Miles	8.6 63,000	6.3 46,000	6.0 44,000	*** ***	7.1 52,000	14.9 110,000
Not Reported/ Inapplicable	12.0 88,000	11.3 83,000	14.0 103,000	*** ***	7.8 57,000	23.3 171,000
Total	48.4 355,000	51.6 380,000	55.0 404,000	8.7 64,000	36.3 267,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

How far would you be able to travel for a full-time program:

- A. 1 - 10 miles
- B. 11 - 20 miles
- C. 21 - 30 miles
- D. Over 30 miles

Table 40A. Weekly Fees Able to Pay to Attend Part-Time Job-Related Training

Fees/Course	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
None	4.0 29,000	*** ***	*** ***	*** ***	-- --	10.9 80,000
Less Than \$7.50	8.2 60,000	*** ***	*** ***	*** ***	-- --	16.2 119,000
\$7.50 - \$14.99	10.1 74,000	4.9 36,000	*** ***	*** ***	-- --	22.0 161,000
\$15.00 - \$29.99	8.3	7.4 54,000	4.1 30,000	*** ***	*** ***	23.5 173,000
\$30.00 - \$45.00	4.9 36,000	5.3 39,000	*** ***	*** ***	-- --	14.3 104,000
More Than \$45.00	*** ***	4.1 30,000	*** ***	*** ***	-- --	10.8 105,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	-- --	*** ***
Total	40.1 295,000	28.2 208,000	15.5 114,000	15.9 117,000	*** ***	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If you were to attend a part-time program in a public school -- one that involved three evening hours once a week, for ten weeks -- how much tuition or fees would you be willing to pay for the course:

- A. None
- B. Less than \$7.50 per course
- C. \$7.50 to \$14.99 per course
- D. \$15.00 to \$29.99 per course
- E. \$30.00 to \$45.00 per course
- F. More than \$45.00 per course

Table 40B. Weekly Fees Able to Pay to Attend Part-Time Job-Related Training

Fees/Course	Sex		Geographic Area			Total
	Male	Female	Region 11	Region 3	All Others	
None	5.8 43,000	5.1 37,000	7.1 52,000	*** ***	*** ***	10.9 80,000
Less Than \$7.50	6.2 46,000	9.9 73,000	8.4 62,000	*** ***	6.3 46,000	16.2 119,000
\$7.50 - \$14.99	9.9 73,000	12.1 89,000	12.6 93,000	*** ***	7.7 57,000	22.0 162,000
\$15.00 - \$29.99	12.5 92,000	11.0 81,000	13.7 101,000	*** ***	8.7 64,000	23.5 173,000
\$30.00 - \$45.00	7.5 55,000	6.8 50,000	9.3 68,000	*** ***	4.5 33,000	14.3 105,000
More Than \$45.00	7.5 55,000	*** ***	6.3 46,000	*** ***	*** ***	10.8 79,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Total	48.4 355,000	51.6 380,000	55.0 404,000	8.7 64,000	36.3 267,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If you were to attend a part-time program in a public school -- one that involved three evening hours once a week, for ten weeks -- how much tuition or fees would you be willing to pay for the course:

- A. None
- B. Less than \$7.50 per course
- C. \$7.50 to \$14.99 per course
- D. \$15.00 to \$29.99 per course
- E. \$30.00 to \$45.00 per course
- F. More than \$45.00 per course

Table 41A. Distance Able to Travel to Attend Part-Time Job-Related Training

Distance	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
1 - 10 Miles	17.1 126,000	9.7 71,000	8.6 63,000	7.3 54,000	*** ***	42.7 314,000
11 - 20 Miles	10.3 76,000	9.7 71,000	*** ***	4.0 29,000	-- --	27.9 205,000
21 - 30 Miles	7.0 51,000	4.3 32,000	*** ***	*** ***	-- --	14.8 109,000
More Than 30 Miles	5.1 37,000	4.1 30,000	*** ***	*** ***	-- --	13.1 96,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	-- --	*** ***
Total	40.1 295,000	28.2 208,000	15.5 114,000	15.9 117,000	*** ***	100.0 735,000

QUESTION ELICITING RESPONSE SHOWN IN TABLE ABOVE:

How far would you be able to travel for a part-time program?

- A. 1-10 miles
- B. 11-20 miles
- C. 21-30 miles
- D. Over 30 miles

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Table 41B. Distance Able to Travel to Attend Part-Time Job-Related Training

Distance	Sex		Geographic Area			Total
	Male	Female	Region 11	Region 3	All Others	
1 - 10 Miles	17.7 130,000	25.1 184,000	29.9 220,000	*** ***	10.5 77,000	42.7 314,000
11 - 20 Miles	15.5 114,000	12.5 92,000	17.6 129,000	*** ***	9.0 66,000	27.9 205,000
21 - 30 Miles	8.4 62,000	6.4 47,000	5.3 39,000	*** ***	7.7 57,000	14.8 109,000
More Than 30 Miles	8.1 60,000	5.0 37,000	4.7 35,000	*** ***	7.0 51,000	13.1 96,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Total	48.4 355,000	51.6 380,000	55.0 404,000	8.7 64,000	36.3 267,000	100.0 735,000

QUESTION ELICITING RESPONSE SHOWN IN TABLE ABOVE:

How far would you be able to travel for a part-time program:

- A. 1-10 miles
- B. 11-20 miles
- C. 21-30 miles
- D. Over 30 miles

Table 42A. Knowledge of Vocational Education

Knowledge of Vocational Education	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
Appropriate	35.4 260,000	25.1 184,000	14.8 109,000	12.8 94,000	*** ***	88.2 648,000
Inappropriate	*** ***	*** ***	*** ***	*** ***	-- --	9.7 71,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	-- --	*** ***
Total	40.1 295,000	28.2 208,000	15.5 114,000	15.9 117,000	*** ***	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If a friend asked you to describe the purpose of vocational education what would you say?

- A. Training for a job or work
- B. Other (Specify) _____

Table 42B. Knowledge of Vocational Education

Knowledge of Vocational Education	Sex		Geographic Area			Total
	Male	Female	Region 11	Region 3	All Others	
Appropriate	45.0 331,000	43.2 318,000	51.0 375,000	6.5 48,000	30.7 226,000	88.2 648,000
Inappropriate	4.7 35,000	5.0 37,000	6.3 46,000	*** ***	*** ***	9.7 71,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	-- --	*** ***	*** ***
Total	48.4 355,000	51.6 380,000	55.5 404,000	8.7 64,000	36.3 267,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If a friend asked you to describe the purpose of vocational education what would you say?

- A. Training for a job or work
- B. Other (Specify) _____

Table 43A. Attitude Toward Vocational Education

Attitude	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
Very Positive	*** ***	*** ***	*** ***	*** ***	-- --	7.6 56,000
Positive	23.7 174,000	17.1 126,000	9.7 71,000	8.1 60,000	*** ***	58.7 431,000
Neutral	9.3 68,000	5.1 37,000	*** ***	*** ***	-- --	21.4 157,000
Negative	*** ***	-- --	*** ***	*** ***	-- --	*** ***
Very Negative	-- --	-- --	*** ***	-- --	-- --	*** ***
Not Reported/ Inapplicable	4.6 34,000	*** ***	*** ***	*** ***	-- --	11.8 87,000
Total	40.1 295,000	28.2 208,000	15.5 114,000	15.9 117,000	*** ***	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

See Question 35 in the list of selected questions shown in Appendix I.

Table 43B. Attitude Toward Vocational Education

Attitude	Sex		Geographic Area			Total
	Male	Female	Region 11	Region 3	All Others	
Very Positive	*** ***	4.2 31,000	4.7 35,000	*** ***	*** ***	7.6 56,000
Positive	29.4 216,000	29.3 215,000	35.6 262,000	*** ***	19.2 141,000	58.7 431,000
Neutral	11.8 87,000	9.6 71,000	10.4 76,000	*** ***	9.3 68,000	21.4 157,000
Negative	*** ***	-- --	*** ***	-- --	*** ***	*** ***
Very Negative	-- --	*** ***	*** ***	-- --	-- --	*** ***
Not Reported/ Inapplicable	5.8 43,000	6.0 44,000	7.6 56,000	*** ***	*** ***	11.8 87,000
Total	48.4 355,000	51.6 380,000	55.0 404,000	8.7 64,000	36.3 267,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

See Question 35 in the list of selected questions shown in Appendix I.

Table 44
Age of Those Needing More Education
for Hobbies and Special Interests

Age Group (Years)	Percentage Estimate	Population Estimate
16-25	30.2	370,000
26-35	28.4	348,000
36-45	14.5	178,000
46-70	25.1	307,000
Above 70	***	***
Total	100.0	1,227,000

Note: The "cut-off" point below which the percentage estimate and population estimate were too small to estimate accurately given the sample size was about 2.4 percent or 29,000.

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Your age is: _____ number of years

Do you want more education for hobbies or special interests for any of the following reasons?

- A. Better use of your leisure time
- B. Save money by doing things yourself
- C. General self-improvement
- D. Other (specify) _____
- E. Do not want more hobby or special interest education

Note: Responses A-D were considered to be positive responses.

Table 45
Gender of Those Needing More Education
for Hobbies and Special Interests

Sex	Percentage Estimate	Population Estimate
Male	42.0	516,000
Female	58.0	711,000
Total	100.0	1,227,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Sex: _____

Do you want more education for hobbies or special interests for any of the following reasons:

- A. Better use of your leisure time
- B. Save money by doing things yourself
- C. General self-improvement
- D. Other (specify) _____
- E. Do not want more hobby or special interest education

Note: Responses A-D were considered to be positive responses.

Table 46
Geographic Area of Those Needing More Education
for Hobbies and Special Interests

Geographic Area	Percentage Estimate	Population Estimate
Region 11	51.7	635,000
Region 3	8.7	107,000
All other	39.5	485,000
Total	100.0	1,227,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Region: _____

Do you want more education for hobbies or special interests for any of the following reasons?

- A. Better use of your leisure time
- B. Save money by doing things yourself
- C. General self-improvement
- D. Other (specify) _____
- E. Do not want more hobby or special interest education

Note: Responses A-D were considered to be positive responses.

Table 47A Reason More Education for Hobbies and Special Interests is Needed

Reason	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
Use of Leisure Time	6.9 85,000	6.0 74,000	3.0 37,000	9.7 119,000	*** ***	26.6 326,000
Save Money Doing It	8.8 108,000	7.0 86,000	3.5 43,000	5.0 61,000	*** ***	24.6 302,000
Self-Improvement	13.7 168,000	14.9 183,000	7.8 96,000	9.8 120,000	*** ***	46.7 573,000
Other	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Total	30.2 370,000	28.4 348,000	14.5 178,000	25.1 307,000	*** ***	100.0 1,227,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Do you want more education for hobbies or special interests for any of the following reasons?

- A. Better use of your leisure time
- B. Save money by doing things yourself
- C. General self-improvement
- D. Other (specify) _____
- E. Do not want more hobby or special interest education

Note: Responses A-D were considered to be positive responses.

Table 47B Reason More Education for Hobbies and Special Interests is Needed

Reason	Sex		Region			Total
	M	F	Region 11	Region 3	All Others	
Use of Leisure Time	9.6 118,000	17.0 209,000	13.4 171,000	*** ***	10.2 125,000	26.6 326,000
Save Money Doing It	13.3 163,000	11.2 137,000	11.3 139,000	*** ***	11.0 135,000	24.6 302,000
Self-Improvement	18.0 221,000	28.7 352,000	25.3 310,000	3.7 45,000	17.6 216,000	46.7 573,000
Other	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Total	42.0 516,000	58.0 711,000	51.7 635,000	8.7 107,000	39.5 485,000	100.0 1,227,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Do you want more education for hobbies or special interests for any of the following reasons:

- A. Better use of your leisure time
- B. Save money by doing things yourself
- C. General self-improvement
- D. Other (specify) _____
- E. Do not want more hobby or special interest education

Note: Responses A-D were considered to be positive responses.

Table 48A

Program for Which More Education
for Hobbies and Special Interests is Needed

Program	Age					Total
	16-25	26-35	36-45	46-70	Above 70	
Home Related	6.4 79,000	6.4 79,000	4.1 30,000	6.1 75,000	*** ***	23.4 287,000
Arts/Crafts	4.7 58,000	4.6 56,000	*** ***	5.8 71,000	*** ***	17.9 220,000
Music	3.3 40,000	*** ***	*** ***	*** ***	*** ***	7.5 92,000
Recreation	3.6 44,000	*** ***	*** ***	*** ***	*** ***	8.3 102,000
Basic Skills	*** ***	*** ***	*** ***	*** ***	*** ***	3.5 43,000
Technical	8.4 103,000	8.9 109,000	3.8 28,000	5.9 72,000	*** ***	27.3 335,000
Liberal Arts	*** ***	2.7 33,000	*** ***	*** ***	*** ***	8.5 104,000
Other	*** ***	*** ***	*** ***	*** ***	*** ***	3.1 38,000
Not Reported/ Inapplicable	*** ***	*** ***	-- --	*** ***	-- --	*** ***
Total	30.2 370,000	28.4 348,000	14.5 178,000	25.1 307,000	*** ***	100.0 1,227,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

What type of program are you most interested in taking?

- A. Home-related skills (examples: quilting, flower arrangement, child care, gourmet cooking, sewing)
- B. Arts and crafts (examples: oil painting, art, leather tooling).
- C. Music (examples: guitar, banjo, piano)
- D. Recreation (examples: camping, bridge, dancing)
- E. Basic skills (examples: refresher math, basic English)
- F. Technical (examples: home remodeling, auto repair, plumbing, electrical wiring)
- G. Liberal arts (examples: history, economics, foreign language)
- H. Other (Specify)

Table 48B

Program for Which More Education
for Hobbies and Special Interests is Needed

Program	Sex		Geographic Area			Total
	Male	Female	Region 11	Region 3	All Others	
Home Related	*** ***	22.2 272,000	10.9 134,000	*** ***	10.5 129,000	23.4 287,000
Arts/Crafts	4.1 50,000	13.8 101,000	9.6 118,000	*** ***	6.6 81,000	17.9 220,000
Music	2.7 33,000	4.9 60,000	4.2 52,000	*** ***	2.8 34,000	7.5 92,000
Recreation	*** ***	4.5 55,000	4.8 59,000	*** ***	2.8 34,000	8.3 102,000
Basic Skills	*** ***	*** ***	*** ***	*** ***	*** ***	3.5 43,000
Technical	23.8 292,000	3.4 42,000	13.2 162,000	*** ***	11.5 141,000	27.3 335,000
Liberal Arts	3.1 38,000	5.4 66,000	5.2 64,000	*** ***	2.8 34,000	8.5 104,000
Other	*** ***	*** ***	*** ***	*** ***	*** ***	3.1 38,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	-- --	*** ***	
Total	42.0 516,000	58.0 711,000	51.7 635,000	8.7 107,000	39.5 485,000	100.0 1,227,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

What type of program are you most interested in taking?

- A. Home-related skills (examples: quilting, flower arrangement, child care, gourmet cooking, sewing)
- B. Arts and crafts (examples: oil painting, art, leather tooling)
- C. Music (examples: guitar, banjo, piano)
- D. Recreation (examples: camping, bridge, dancing)
- E. Basic skills (examples: refresher math, basic English)
- F. Technical (examples: home remodeling, auto repair, plumbing, electrical wiring)
- G. Liberal arts (examples: history, economics, foreign language)
- H. Other (Specify)

SELECTED OBSERVATIONS

As in the previous chapter, the observations which follow are based on a review of the tables in this chapter. They are not intended to be exhaustive; rather, they were selected to summarize and to provoke additional study of the information.

Desired Characteristics of Job-Related Training

- Most frequent desired purpose of training was to prepare for different unrelated job and to remain qualified at present job; about 219,000 and 193,000 persons, respectively, were estimated to hold these reasons in 1977. Only about 9 percent wanted training for a first job, most of these were in the age group 16-25 years old. To remain qualified at present job was a reason for training given at a fairly constant rate across all age groups 16-25 to 46-70. Prepare for re-entry as a reason was more frequent for females in contrast to males.
- Most frequent desired type of training, in terms of occupation, was professional and technical; one-fourth of those indicating a positive need for job-related training selected this occupational category; this amounted to about 187,000 persons in 1977. Next most frequent were crafts workers, clerical workers, and managers and administrators. A large group (about 85,000 in 1977) of those wanting training for professional and technical occupations were in the age group 16-25. Professional and technical, manager and administrator and crafts worker occupations were most frequently selected by males; whereas, professional and technical and clerical workers occupations were most frequently selected by females. There were no major differences in rate of occupational choice when comparing Region 11 with Regions other than 3 and 11.
- Industry of most frequent choice for job training was entertainment and recreational services which included about one-fifth of those needing training or about 159,000 persons in 1977; this industry choice was three times as prevalent for females as compared to males.
- About 40 percent of those needing training were interested enough to

pay a non-refundable fee in order to hold a place in a course; this amounted to about 299,000 persons in 1977. In general, interest was higher for younger than older age groups.

- Similarly, almost half of the persons in need (45 percent) were willing to enroll within the next two months, also an indication of immediacy of interest; this response was given more frequently by the younger age groups.
- Winter and fall were the most desired times of the year to attend job related training. Winter was most preferred by males while fall was preferred by females. In Region 11, fall and winter were equally preferred; however, in Regions other than 11 and 3, winter was most preferred.
- Two to four days per week for attending job-related training was preferred over one day or more than four days. For those age 26 to 70, one day and two to four days were most desirable.
- Nights was the preferred time of week to attend training by two-thirds of those indicating a positive need for training. About 44 percent indicated days would be convenient. For those age 26-35, there was twice as much preference for nights as days. Males preferred nights much more than days whereas for females, the rate of choice for days and nights was more equal. Residents of Region 11 preferred nights over days at a higher rate than those in Regions other than 3 and 11.
- Three to five hours was the desired time which could be devoted to training per day by about one-half of those in need of training.
- Instructional media preference was in school and on-the-job; each of these choices accounted for about one-half of those in need; respectively, these preferences were estimated to be held by about 356,000 and 309,000 persons in 1977. All other media choices had very low preference. For those 16-25, on-the-job was preferred over in school; the reverse was true for those age 26 to 70. In school was more desired than on-the-job for residents of Regions other than 3 and 11.
- For about one-fourth of those needing training or about 187,000 persons in 1977 "work takes too much time" was the most frequent hindrance to enrolling; next most frequent was "cost of program" which was estimated to be a hindrance to enrollment by about 105,000 persons

in 1977. Family obligations, were much more of a hindrance to enrollment for females.

- Of those where cost of program was a hindrance to enrollment, about one-third would definitely borrow money to attend. About 45 percent would definitely be willing to seek a part-time job to attend training.
- Most desired fee level for full-time training was "none" followed by \$7.50 to \$14.99 for the course. Higher fees were more willing to be paid by those age 16-26 than by those 26-35. Males were willing to pay higher fees than females. While "none" was the most preferred fees for residents of Region 11, those living in Regions other than 3 and 11 were most frequently willing to pay \$7.50 to \$14.99 per course.
- One to ten miles was the most frequent choice of distance willing to travel to attend a full-time training. Males were willing to travel 11-20 miles more frequently than 1-10 miles; females were much more frequently willing to travel only 1-10 miles. Those in Region 11 were much less willing to travel over 20 miles than those in Regions other than 3 and 11.
- For part-time job-related training, almost one-quarter of those in need were willing to pay \$7.50 - \$14.99 per week and another one-quarter, \$15.00 - \$29.99 per week. Females were willing to pay less than males.
- One to ten miles was also the most frequent choice of distance willing to travel to attend a part-time program; this choice was much more frequent for part-time compared to full-time programs. Females were willing to travel less distance than males. Those in Region 11 were again much less willing to travel greater distance than those in Regions other than 3 and 11.
- Almost 90 percent of those needing job-related training knew that the purpose of vocational education was training for a job or work.
- About two-thirds of those needing training had a positive or very positive attitude toward vocational education.

Desired Characteristics of Education for Hobbies and Special Interests

- Most frequent desired purpose for needing program was self improvement, followed by better use of leisure time and save money by doing it myself;

more than 300,000 individuals were estimated to have each of these reasons. For males, save money by doing it myself was a more frequent reason compared to better use of leisure time; the opposite was evident for females.

- Programs with most preference were technical, home related, and arts and crafts; approximately 335,000 individuals were estimated to be interested in technical programs, 287,000 in home related programs. Males had most preference for technical programs; females for home related and arts and crafts.

Chapter V

NEED FOR VOCATIONAL EDUCATION

The tables presented in the previous chapter summarized responses to questions concerning the characteristics of training programs which were found to be most desired. Responses were categorized according to three demographic characteristics: age, sex and geographic area. This chapter is again concerned with characteristics of training programs, but instead, these responses are categorized according to Vocational Education program.

REPORTING FORMAT

The decision as to which Vocational Education program was most relevant was accomplished by considering the occupation and industry for which the respondent needed more job-related training. Seven Vocational Education programs were used: Agriculture, Home Economics (Occupational), Business and Office, Distributive, Health, Trade and Industrial, and Technical. These programs are the major categories of Vocational Education programs used by the United States Office of Education. In addition to these programs, however, additional categories were added since not all respondents were definite about the occupation or industry for which they needed training and because some occupations in which training was needed were not within the instructional areas of Vocational Education (e.g., engineers, certified accountants). Respondents who were not definite about occupation and/or industry for which training was needed were placed in an "undecided" category; and those needing training in an occupation for which Vocational Education was inappropriate were labeled "non-vocational education". Appendix III shows how the occupation and industry combinations were assigned to Vocational Education programs.

Table 49 summarizes the percentage and population estimates for each Vocational Education program. A minimum and a maximum estimate is shown for each program. These two estimates resulted from the way in which occupation and industry combinations relate to Vocational Education programs. In some cases, training for an occupation and industry combination was judged

to be appropriate for only one Vocational Education program area; where respondents indicated a need for such training, they were assigned to that single program. For example as shown in Appendix III, those wanting training for the occupation of welders and flame cutters, no matter what industry, were assigned to the trade and industrial program. However, for many occupation and industry combinations training was judged to be appropriate for more than one program; here, all the programs that were potentially appropriate sources of training for the occupation and industry combination were assigned to the combination. In this case, respondents indicating a need for training in the occupation and industry combination were assigned to more than one program category. For example, those wanting training for the occupation of sales clerks, retail trade, in the industry of lumber and building materials, retail, were assigned to the agriculture, distributive, and trade and industrial programs. The minimum percentage and population estimate for each Vocational Education program was derived by counting only those respondents who were assigned to that single Vocational Education program and no others. The maximum estimate for each program was obtained by counting all respondents assigned to the program even if they were also assigned to other programs. With this procedure, the maximum estimates include double counting when looking across Vocational Education programs since the same individual may have been assigned to several programs and was therefore counted several times.

The estimates shown in Table 49 for non-vocational education were derived in the same way as for Vocational Education programs. The minimum estimate was calculated by counting need for training in only those occupation and industry combinations assigned only to the non-vocational category in Appendix III. Lawyer in the industry of state public administration is a combination assigned to only the non-vocational education category. The maximum estimated is based on indicated need for training in all occupation and industry combinations assigned to the non-vocational education category even if it was also assigned to one or more Vocational Education programs. For some occupations, training could appropriately come from both types of training; for example, training for accountants would be appropriate from non-vocational education (e.g., colleges) and business programs in Vocational Education.

Tables 50-67 have a consistent format. As in the preceding chapter, each table summarizes information about a desired characteristic of the training program as described by the row headings. For example, Table 50 summarizes information about "reasons for needing job-related training". The responses for each reason were sub-divided according to Vocational Education programs designated by the column headings. Maximum estimates were used as the basis for numbers shown in these tables. Some idea of the extent of "double counting" can be obtained by comparing the sum of estimates for each program with the estimates in the "total vocational education" column. In this total column, respondents are only counted once no matter how many single programs they were assigned to as shown in Appendix III.

The interaction of each column and row category provide an information cell in which estimates are placed. There are, as previously discussed, two estimates; a percentage estimate and a population estimate. In this chapter, the estimated percentage--the upper number in the cell--again refers to a proportion of a proportion of the population of Minnesota, 16 years old and older, who would give the response indicated in the row category (e.g., reason: to prepare for a first job) and fit into the program indicated by the column category (e.g., health). It is a proportion of a proportion because the percentage estimate refers to only that proportion of the population who were estimated to have a need for more job-related training (shown in Chapter III) who, in turn, were estimated to fit into Vocational Education programs based on the industry and occupation combination for which training was needed. The lower number in the cell is a population estimate of the number of people in Minnesota, age 16 and older, who would be expected to give the responses characterized by that cell. Population estimates were derived by multiplying the estimated percentage times the estimated total number of persons needing job-related training which was 735,000 as shown in the lower right hand corner of Tables 50-67.

As indicated in the previous chapter, where the number of responses from the sample was too small to make confident estimates, a series of asterisks (***) was placed in the cells. If no responses were obtained from the sample to fit that particular cell, a series of dashes (---) was used. Percentage estimates were rounded to the nearest tenth and popu-

lation estimates to the nearest thousand.

The subtotals at the right and bottom of each table provide percentage and population estimates for each category of training program characteristics and vocational education program, respectively. The row sub-totals at the far right do not include "double counting"; rather, they are unique estimates. Because of rounding errors, columns and rows may not add to exact sub-totals.

Since both percentage and population estimates were based on a sample, they were subject to sampling error. The size of this error was based on the size of the sample relative to the population and on the proportion of the sample fitting a particular category of interest. The error estimates associated with each table are shown in Appendix II.

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Table 49

Need for More Job-Related Training for Each Vocational Education Program

Vocational Education Program	Minimum		Maximum	
	Percentage Estimate	Population Estimate	Percentage Estimate	Population Estimate
Agriculture	***	***	6.7	50,000
Home Economics (Occup.)	***	***	6.0	44,000
Business and Office	12.0	89,000	17.0	125,000
Distributive	***	***	16.1	118,000
Health	5.3	39,000	11.8	87,000
Trade and Industrial	15.6	115,000	30.2	222,000
Technical	***	***	8.7	64,000
Non-Vocational Education	16.7	123,000	38.7	284,000
Undecided	6.9	50,000	7.7	56,000

Note: The "cut-off" point below which the percentage estimate and population estimate were too small to estimate accurately given the sample size was about 4 percent or 29,500.

Table 50. Reason Why More Job-Related Training is Needed for Each Vocational Education Program

Reason	Agri- culture	Home Ec. (Occup.)	Business	Distrib. Education	Health	Indus- trial	Technical	Total Voc. Ed.	Undecided	Non- Voc. Ed.	Total
Prepare for First Job	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	6.7 49,000	*** ***	*** ***	9.3 68,000
Prepare for Unrelated Job	*** ***	*** ***	4.4 33,000	4.0 30,000	*** ***	3.1 60,000	*** ***	18.6 137,000	*** ***	8.0 59,000	26.3 193,000
Prepare for Re-Entry	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	7.5 55,000	*** ***	*** ***	9.4 69,000
Prepare for Job Promotion	*** ***	*** ***	*** ***	4.3 35,000	*** ***	7.1 52,000	*** ***	14.7 108,000	*** ***	8.9 66,000	20.0 147,000
To Remain Qualified	*** ***	*** ***	*** ***	4.7 34,000	4.9 36,000	3.5 63,000	*** ***	21.6 159,000	*** ***	14.4 106,000	29.8 219,000
Other	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Total	6.7 50,000	6.0 44,000	17.0 125,000	16.1 118,000	11.8 87,000	30.2 222,000	8.7 64,000	71.3 524,000	7.7 56,000	38.7 284,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Here is a list of reasons why some people plan or want to take job-related training. Which one best describes your reason for wanting or planning to take more job-related training in the next 12 months?

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- A. Prepare for a first job
 - B. Prepare for a job which is unrelated to a job you have or have had
 - C. Prepare to re-enter a job similar to one you have had in the past
 - D. Prepare for a job promotion or advancement

- E. Prepare to do better at or remain qualified for your present job
 - F. Other (Specify) _____
 - G. None of the above
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Table 51. Occupation for Which More Job-Related Training is Needed for Each Vocational Education Program

Occupation	Agri- culture	Home Ec. (Occup.)	Business	Distrib. Education	Health	Indus- trial	Technical	Total Voc. Ed.	Undecided	Non- Voc. Ed.	Total
Professional/ Technical	*** ***	*** ***	*** ***	*** ***	4.5 33,000	*** ***	*** ***	12.9 95,000	*** ***	20.8 153,000	25.4 187,000
Managers/ Administrators	*** ***	*** ***	*** ***	7.0 51,000	*** ***	4.6 34,000	*** ***	7.5 55,000	-- --	9.0 66,000	9.3 68,000
Sales Workers	*** ***	*** ***	-- --	4.7 35,000	-- --	*** ***	*** ***	4.7 35,000	-- --	*** ***	4.7 35,000
Clerical Workers	*** ***	-- --	10.0 74,000	*** ***	*** ***	*** ***	*** ***	10.6 78,000	-- --	*** ***	10.7 79,000
Craft Workers	*** ***	*** ***	-- --	*** ***	-- --	11.9 87,000	*** ***	12.2 90,000	-- --	*** ***	12.2 90,000
Operatives	-- --	*** ***	-- --	-- --	-- --	*** ***	-- --	*** ***	-- --	-- --	*** ***
Service Workers	-- --	*** ***	-- --	*** ***	*** ***	*** ***	-- --	7.7 57,000	-- --	-- --	7.7 57,000
Not Specific/ Do Not Know	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	6.4 47,000	-- --	7.9 58,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	11.0 81,000	*** ***	6.0 44,000	17.5 129,000
Total	6.7 49,000	6.0 44,000	17.0 124,000	16.1 117,000	11.8 86,000	30.2 220,000	8.7 64,000	71.2 518,000	7.7 56,000	38.7 282,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

See Question 14 in the list of selected questions shown in Appendix I.

Table 52. Degree of Interest in More Job-Related Training for Each Vocational Education Program

Degree of Interest	Agri- culture	Home Ec. (Occup.)	Business	Distrib. Education	Health	Indus- trial	Technical	Total Voc. Ed.	Undecided	Non- Voc. Ed.	Total
Will Read Descrip- tive Information	4.9 36,000	7.2 53,000	13.0 96,000	16.1 118,000	10.9 80,000	29.0 213,000	7.5 55,000	60.6 445,000	8.4 62,000	31.2 229,000	85.4 628,000
List Name as Potential Student	4.1 30,000	6.2 46,000	11.2 82,000	13.9 102,000	9.6 71,000	25.3 186,000	6.7 49,000	53.3 392,000	6.9 51,000	27.6 203,000	74.3 546,000
Attend Meeting to Help Plan	*** ***	4.9 36,000	9.5 70,000	10.9 80,000	7.4 54,000	20.5 151,000	4.9 36,000	41.9 308,000	5.5 40,000	22.1 162,000	60.0 441,000
Recruit Others for Class	*** ***	4.2 31,000	6.1 45,000	7.5 55,000	6.2 46,000	16.0 118,000	*** ***	30.5 225,000	*** ***	15.9 117,000	43.7 322,000
Pay Non- Refundable Fee	*** ***	4.2 31,000	5.7 42,000	7.1 52,000	5.3 39,000	15.7 115,000	*** ***	28.9 212,000	*** ***	14.2 104,000	40.7 299,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

- A. Are you interested enough in more job-related training to look through and read specific information about available programs? ☐ Yes ☐ No
- B. Are you interested enough to list your name as a potential student? ☐ Yes ☐ No
- C. Are you interested enough to attend a meeting with other interested individuals to help plan a course or program? ☐ Yes ☐ No
- D. Are you interested enough to recruit others to enable the class to be offered? ☐ Yes ☐ No
- E. Are you interested enough to pay a \$5.00 non-refundable fee in order to hold a place for yourself in a course? ☐ Yes ☐ No

Table 53. How Soon in Next Year Willing to Enroll in More Job-Related Training for Each Vocational Education Program

How Soon to Enroll	Agri- culture	Home Ec. (Occup.)	Business	Distrib. Education	Health	Indus- trial	Technical	Total Voc. Ed.	Undecided	Non- Voc. Ed.	Total
0-2 Months	*** ***	*** ***	5.9 43,000	8.5 62,000	5.7 42,000	14.1 104,000	4.4 32,000	32.0 235,000	*** ***	17.5 129,000	44.7 329,000
3-5 Months	*** ***	*** ***	4.6 34,000	4.1 30,000	*** ***	7.9 58,000	*** ***	18.5 136,000	*** ***	9.0 66,000	25.8 190,000
6-8 Months	*** ***	*** ***	*** ***	4.6 34,000	*** ***	7.7 57,000	*** ***	16.4 121,000	*** ***	8.7 64,000	21.5 158,000
9-12 Months	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	5.2 38,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Total	6.7 50,000	6.0 44,000	17.0 125,000	16.1 118,000	11.8 87,000	30.2 222,000	8.7 64,000	71.3 524,000	7.7 56,000	38.7 284,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If the job training program of your choice were available, how soon within the next 12 months would you want to enroll?

Number of Months

Table 54. Time of Year Convenient to Attend Job-Related Training for Each Vocational Education Program

Season	Agri- culture	Home Ec. (Occup.)	Business	Distrib. Education	Health	Indus- trial	Technical	Total Voc. Ed.	Undecided	Non- Voc. Ed.	Total
Spring	*** ***	*** ***	8.5 62,000	7.3 54,000	6.9 51,000	12.8 94,000	*** ***	33.2 244,000	*** ***	19.1 141,000	46.6 342,000
Summer	*** ***	*** ***	5.6 41,000	6.0 44,000	5.9 43,000	10.1 74,000	*** ***	26.6 196,000	*** ***	17.1 126,000	39.4 290,000
Fall	*** ***	*** ***	12.3 90,000	9.4 69,000	8.6 63,000	17.0 125,000	4.8 36,000	43.6 320,000	4.9 36,000	24.3 178,000	60.3 443,000
Winter	5.1 37,000	*** ***	10.7 78,000	10.9 80,000	7.3 53,000	23.0 169,000	6.5 48,000	49.5 364,000	4.7 34,000	25.7 189,000	66.2 486,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If you were to attend a job-related training program, which times of year would be convenient:

- _____ Spring
- _____ Summer
- _____ Fall
- _____ Winter

Table 55. Days per Week Could Attend Job-Related Training for Each Vocational Education Program

Days/Week	Agri- culture	Home Ec. (Occup.)	Business	Distrib. Education	Health	Indus- trial	Technical	Total Voc. Ed.	Undecided	Non- Voc. Ed.	Total
1 Day	*** ***	*** ***	4.8 35,000	6.0 44,000	4.2 31,000	9.8 72,000	*** ***	23.2 171,000	*** ***	14.4 106,000	32.2 237,000
2-4 Days	*** ***	*** ***	8.4 62,000	6.5 48,000	4.7 35,000	11.9 87,000	*** ***	30.1 221,000	*** ***	13.8 102,000	40.5 297,000
More than 4 Days	*** ***	*** ***	*** ***	*** ***	*** ***	7.8 58,000	*** ***	16.7 123,000	*** ***	9.9 73,000	24.0 177,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	-- --	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Total	6.7 50,000	6.0 44,000	17.0 125,000	16.1 118,000	11.8 87,000	30.2 222,000	8.7 64,000	71.3 524,000	7.7 56,000	38.7 284,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If you were to attend a job-related training program, how many days per week could you devote to the program?

- _____ 1 day a week
- _____ 2-4 days a week
- _____ 5 or more days a week

Table 56. Time of Week Convenient to Attend Job-Related Training for Each Vocational Education Program

Time of Week	Agri- culture	Home Ec. (Occup.)	Business	Distrib. Education	Health	Indus- trial	Technical	Total Voc. Ed.	Undecided	Non- Voc. Ed.	Total
Days	*** ***	*** ***	7.3 54,000	6.5 48,000	6.3 46,000	11.4 84,000	*** ***	31.2 227,000	*** ***	17.2 127,000	44.2 325,000
Nights	4.5 33,000	*** ***	10.7 79,000	10.5 77,000	7.0 52,000	19.7 145,000	5.9 44,000	44.3 323,000	4.4 32,000	25.0 184,000	61.1 449,000
Weekends	*** ***	*** ***	*** ***	*** ***	*** ***	4.4 32,000	*** ***	11.0 80,000	*** ***	7.5 55,000	15.9 117,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Would days, nights or weekends be convenient?

☐ Days
☐ Nights
☐ Weekends

Table 57. Hours per Day Could Attend Job-Related Training for Each Vocational Education Program

Hours/Day	Agri- culture	Home Ec. (Occup.)	Business	Distrib. Education	Health	Indus- trial	Technical	Total Voc. Ed.	Undecided	Non- Voc. Ed.	Total
2 Hours	*** ***	*** ***	4.9 36,000	4.3 32,000	*** ***	6.6 48,000	*** ***	16.6 121,000	*** ***	9.6 71,000	23.4 172,000
3-5 Hours	*** ***	*** ***	8.7 64,000	7.4 55,000	5.4 55,000	14.5 107,000	4.5 33,000	35.0 255,000	*** ***	17.3 127,000	47.1 246,000
More than 5 Hours	*** ***	*** ***	*** ***	4.2 31,000	*** ***	8.7 64,000	*** ***	18.9 138,000	*** ***	11.6 85,000	27.0 198,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	-- --	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Total	6.7 50,000	6.0 44,000	17.0 125,000	16.1 118,000	11.8 87,000	30.2 222,000	8.7 64,000	71.3 524,000	7.7 56,000	38.7 284,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

How many hours per day could you devote to the program?

- ☐ 2 hours or less
- ☐ 3-5 hours
- ☐ 6 hours or more

Table 58. Instructional Media Preferred for More Job-Related Training for Each Vocational Education Program

Preference	Agri- culture	Home Ec. (Occup.)	Business	Distrib. Education	Health	Indus- trial	Technical	Total Voc. Ed.	Undecided	Non- Voc. Ed.	Total
In School	*** ***	*** ***	8.1 59,000	8.8 64,000	6.6 49,000	13.3 97,000	4.2 31,000	34.3 250,000	*** ***	22.8 168,000	48.5 356,000
On the Job	*** ***	*** ***	7.5 55,000	5.9 43,000	4.2 31,000	14.3 105,000	*** ***	30.8 225,000	4.2 31,000	12.2 90,000	42.0 309,000
Educational TV	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	-- --	*** ***	*** ***
Radio	-- --	-- --	*** ***	-- --	-- --	*** ***	-- --	*** ***	-- --	*** ***	*** ***
Correspondence	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	4.2 31,000
Other	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Not Reported/ Inapplicable	-- --	*** ***	*** ***	*** ***	-- --	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Total	6.7 50,000	6.0 44,000	17.0 125,000	16.1 118,000	11.8 87,000	30.2 222,000	8.7 64,000	71.3 524,000	7.7 56,000	38.7 284,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If you were to enroll in job-related training how would you prefer to receive instruction?

- A. In school
- B. On-the-job
- C. Educational television

- D. Radio
- E. Correspondence
- F. Other (Specify) _____

Table 59. Hindrances to Enrolling in More Job-Related Training for Each Vocational Education Program

Hindrances	Agri- culture	Home Ec. (Occup.)	Business	Distrib. Education	Health	Indus- trial	Technical	Total Voc. Ed.	Undecided	Non- Voc. Ed.	Total
Work Takes Too Much Time	*** ***	*** ***	*** ***	4.8 35,000	*** ***	8.5 63,000	*** ***	17.8 129,000	*** ***	11.9 87,000	25.5 187,000
Family Obligations	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	7.8 57,000	*** ***	4.6 34,000	10.9 80,000
Transportation Problems	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	5.1 38,000
Lack of Information	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	7.0 51,000	*** ***	*** ***	10.4 76,000
Cost of Program	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	9.1 67,000	*** ***	5.8 42,000	14.3 105,000
Other	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Not Reported/ Inapplicable	*** ***	*** ***	10.1 74,000	8.7 64,000	6.5 47,000	17.6 130,000	4.9 36,000	41.6 306,000	*** ***	20.7 151,000	56.9 418,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Are any of the following reasons likely to keep you from enrolling in a job-related training program in the next 12 months:

- A. Work takes too much time (asked only if respondent was working)
- B. Family obligations
- C. Transportation problems
- D. Lack of information about programs
- E. Cost of program

Table 60. Willingness to Borrow Money to Attend Job-Related Training for Each Vocational Education Program

Will Borrow Money?	Agri- culture	Home Ec. (Occup.)	Business	Distrib. Education	Health	Indus- trial	Technical	Total Voc. Ed.	Undecided	Non- Voc. Ed.	Total
Yes	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	6.3 46,000	*** ***	*** ***	9.2 68,000
No	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	8.4 62,000	*** ***	5.0 37,000	13.3 98,000
Maybe	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	5.3 39,000	*** ***	*** ***	7.7 57,000
Not Reported/ Inapplicable	4.1 30,000	4.8 35,000	10.7 79,000	14.6 107,000	6.6 49,000	24.7 182,000	6.2 46,000	51.4 378,000	5.5 40,000	27.6 202,000	69.8 513,000
Total	6.7 50,000	6.0 44,000	17.0 125,000	16.1 118,000	11.8 87,000	30.2 222,000	8.7 64,000	71.3 524,000	7.7 56,000	38.7 284,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Would you borrow money in order to be able to attend (asked only of respondents for whom cost was a hindrance)?

- A. Yes
- B. No
- C. Maybe

Table 61. Willingness to See Part-Time Job to Attend Job-Related Training
for Each Vocational Education Program

Will Seek Part-Time	Agri- culture	Home Ec. (Occup.)	Business	Distrib. Education	Health	Indus- trial	Technical	Total Voc. Ed.	Undecided	Non- Voc. Ed.	Total
Yes	*** ***	*** ***	*** ***	*** ***	*** ***	4.3 29,000	*** ***	8.6 63,000	*** ***	4.8 32,000	13.3 97,000
No	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	8.8 64,000	*** ***	5.6 38,000	12.5 91,000
Maybe	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	4.2 31,000
Not Reported/ Inapplicable	4.1 28,000	4.8 32,000	10.8 73,000	14.6 99,000	6.6 45,000	24.7 166,000	6.2 42,000	51.5 375,000	5.5 37,000	27.6 186,000	69.9 509,000
Total	6.7 50,000	6.0 44,000	17.0 125,000	16.1 118,000	11.8 87,000	30.2 222,000	8.7 64,000	71.3 524,000	7.7 56,000	38.7 284,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

Would you seek a part-time job in order to be able to attend (asked only of respondents for whom cost was a hindrance)?

- A. Yes
- B. No
- C. Maybe

Table 62. Weekly Fees Able to Pay to Attend Part-Time Job-Related Training for Each Vocational Education Program

Fees/Course	Agri- culture	Home Ec. (Occup.)	Business	Distrib. Education	Health	Indus- trial	Technical	Total Voc. Ed.	Undecided	Non- Voc. Ed.	Total
None	*** ***	*** ***	*** ***	*** ***	*** ***	4.0 29,000	*** ***	7.6 56,000	*** ***	*** ***	10.9 80,000
Less than \$7.50	*** ***	*** ***	*** ***	*** ***	*** ***	4.5 33,000	*** ***	12.0 88,000	*** ***	4.3 32,000	16.2 119,000
\$7.50-\$14.99	*** ***	*** ***	4.0 29,000	*** ***	*** ***	6.5 48,000	*** ***	16.4 121,000	*** ***	6.8 50,000	22.0 162,000
\$15.00-\$29.99	*** ***	*** ***	*** ***	5.2 38,000	*** ***	8.5 62,000	*** ***	17.5 129,000	*** ***	9.0 66,000	23.5 173,000
\$30.00-\$45.00	*** ***	*** ***	*** ***	*** ***	*** ***	4.5 33,000	*** ***	9.4 69,000	*** ***	6.8 50,000	14.3 105,000
More than \$45.00	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	6.9 51,000	*** ***	6.9 51,000	10.8 79,000
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Total	6.7 50,000	6.0 44,000	17.0 125,000	16.1 117,000	11.8 87,000	30.2 222,000	8.7 64,000	71.3 524,000	7.7 56,000	38.7 284,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If you were to attend a part-time program in a public school -- one that involved three evening hours once a week, for ten weeks -- how much tuition or fees would you be willing to pay for the course:

- A. None
- B. Less than \$7.50 per course
- C. \$7.50 to \$14.99 per course
- D. \$15.00 to \$29.99 per course
- E. \$30.00 to \$45.00 per course
- F. More than \$45.00 per course

Table 63. Distance Able to Travel to Attend Part-Time Job-Related Training
for Each Vocational Education Program

Distance	Agri- culture	Home Ec. (Occup.)	Business	Distrib. Education	Health	Indus- trial	Technical	Total Voc. Ed.	Undecided	Non- Voc. Ed.	Total
1-10 Miles	*** ***	*** ***	8.3 61,000	7.2 53,000	6.0 44,000	12.5 92,000	*** ***	31.3 230,000	5.6 41,000	14.0 103,000	42.7 314,000
11-20 Miles	*** ***	*** ***	*** ***	6.2 46,000	*** ***	10.2 75,000	*** ***	20.2 148,000	*** ***	11.7 86,000	27.9 205,000
21-30 Miles	*** ***	*** ***	*** ***	*** ***	*** ***	4.6 34,000	*** ***	10.0 74,000	*** ***	6.6 49,000	14.8 109,000
More than 30 Miles	*** ***	*** ***	*** ***	*** ***	*** ***	4.1 30,000	*** ***	9.1 67,000	*** ***	5.7 42,000	13.1 96,000
Not Reported/ Inapplicable	-- --	-- --	-- --	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Total	6.7 50,000	6.0 44,000	17.0 125,000	16.1 118,000	11.8 87,000	30.2 222,000	8.7 64,000	71.3 524,000	7.7 56,000	38.7 284,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

How far would you be able to travel for a part-time program:

- ___ 1-10 miles
- ___ 11-20 miles
- ___ 21-30 miles
- ___ Over 30 miles

Table 64. Weekly Fees Able to Pay to Attend Full-Time Job-Related Training
for Each Vocational Education Program

Fees/Week	Agri- culture	Home Ec. (Occup.)	Business	Distrib. Education	Health	Indus- trial	Technical	Total Voc. Ed.	Undecided	Non- Voc. Ed.	Total
None	*** ***	*** ***	*** ***	*** ***	*** ***	6.4 47,000	*** ***	12.3 90,000	*** ***	7.1 52,000	18.0 132,000
Less than \$7.50	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	9.3 68,000	*** ***	*** ***	12.5 92,000
\$7.50-\$14.99	*** ***	*** ***	*** ***	*** ***	*** ***	5.5 40,000	*** ***	12.5 92,000	*** ***	5.6 41,000	17.1 126,000
\$15.00-\$29.99	*** ***	*** ***	*** ***	*** ***	*** ***	4.6 34,000	*** ***	10.2 75,000	*** ***	5.9 43,000	14.8 109,000
\$30.00-\$45.00	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	5.8 43,000	*** ***	*** ***	7.4 54,000
More than \$45.00	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	4.0 29,000	*** ***	4.0 29,000	6.4 47,000
Not Reported/ Inapplicable	*** ***	*** ***	4.4 32,000	5.5 40,000	*** ***	6.5 48,000	*** ***	17.2 126,000	*** ***	10.2 75,000	23.9 176,000
Total	6.7 50,000	6.0 44,000	17.0 125,000	16.1 118,000	11.8 87,000	30.2 222,000	8.7 64,000	71.3 524,000	7.7 56,000	38.7 284,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If you were to attend a full-time training program in a public school -- one that took 30 hours a week, 5 days a week for several months -- how much tuition or fees would you be able to pay per week?

- A. None
- B. Less than \$7.50 per week
- C. \$7.50 to \$14.99 per week
- D. \$15.00 to \$29.99 per week
- E. \$30.00 to \$45.00 per week
- F. More than \$45.00 per week

Table 65. Distance Able to Travel to Attend Full-Time Job-Related Training
for Each Vocational Education Program

Distance	Agri- culture	Home Ec. (Occup.)	Business	Distrib. Education	Health	Indus- trial	Technical	Total Voc. Ed.	Undecided	Non- Voc. Ed.	Total
1-10 Miles	*** ***	*** ***	4.7 35,000	*** ***	*** ***	8.9 65,000	*** ***	19.8 146,000	*** ***	7.3 54,000	27.0 198,000
11-20 Miles	*** ***	*** ***	*** ***	4.8 35,000	*** ***	8.9 65,000	*** ***	16.7 123,000	*** ***	8.2 60,000	22.6 166,000
21-30 Miles	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	8.5 62,000	*** ***	5.4 40,000	12.2 90,000
More than 30 Miles	*** ***	*** ***	*** ***	*** ***	*** ***	4.0 29,000	*** ***	9.8 72,000	*** ***	7.4 54,000	14.9 110,000
Not Reported/ Inapplicable	*** ***	*** ***	4.1 30,000	5.1 37,000	*** ***	6.5 48,000	*** ***	16.5 121,000	*** ***	10.3 76,000	23.3 171,000
Total	6.7 50,000	6.0 44,000	17.0 125,000	16.1 118,000	11.8 87,000	30.2 222,000	8.7 64,000	71.3 524,000	7.7 56,000	38.7 284,000	100.0 735,000

QUESTION ELICITING RESPONSE SHOWN IN TABLE ABOVE:

How far would you be able to travel for a full-time program:

- _____ 1-10 miles
- _____ 11-20 miles
- _____ 21-30 miles
- _____ Over 30 miles

Table 66. Knowledge of Vocational Education and Need for More Job-Training
for Each Vocational Education Program

Knowledge	Agri- culture	Home Ec. (Occup.)	Business	Distrib. Education	Health	Indus- trial	Technical	Total Voc. Ed.	Undecided	Non- Voc. Ed.	Total
Appropriate	5.2 38,000	5.4 40,000	14.3 105,000	16.4 121,000	10.9 80,000	28.1 207,000	8.2 60,000	63.7 468,000	8.2 60,000	34.6 254,000	88.2 648,000
Inappropriate	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	6.5 48,000	*** ***	*** ***	9.7 71,000
Not Reported/ Inapplicable	*** ***	*** ***	-- --	-- --	-- --	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***
Total	6.7 50,000	6.0 44,000	17.0 125,000	16.1 118,000	11.8 87,000	30.2 222,000	8.7 64,000	71.3 524,000	7.7 56,000	38.7 284,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

If a friend asked you to describe the purpose of vocational education what would you say?

- A. Training for a job or work
- B. Other (Specify) _____

Table 67. Attitude Toward Vocational Education and Need for More Job-Related Training for Each Vocational Education Program

Attitude	Agri- culture	Home Ec. (Occup.)	Business	Distrib. Education	Health	Indus- trial	Technical	Total Voc. Ed.	Undecided	Non- Voc. Ed.	Total
Very Positive	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	5.5 40,000	*** ***	*** ***	7.6 56,000
Positive	*** ***	*** ***	10.3 76,000	11.4 84,000	6.8 50,000	19.0 140,000	5.6 41,000	43.3 318,000	4.9 36,000	22.9 168,000	58.7 431,000
Neutral	*** ***	*** ***	*** ***	*** ***	*** ***	6.2 46,000	*** ***	14.6 107,000	*** ***	7.7 57,000	21.4 157,000
Negative	-- --	-- --	-- --	*** ***	-- --	*** ***	*** ***	*** ***	-- --	*** ***	*** ***
Very Negative	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	*** ***	*** ***
Not Reported/ Inapplicable	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	*** ***	7.6 56,000	*** ***	4.0 29,000	11.8 87,000
Total	6.7 50,000	6.0 44,000	17.0 125,000	16.1 118,000	11.8 87,000	30.2 222,000	8.7 64,000	71.3 524,000	7.7 56,000	38.7 284,000	100.0 735,000

QUESTION ELICITING RESPONSES SHOWN IN TABLE ABOVE:

See Question 35 in the list of selected questions shown in Appendix I.

SELECTED OBSERVATIONS

The observations which follow are based on a review of the tables in this chapter. They are not intended to be exhaustive; rather they were selected to summarize and to provoke additional study of the information.

- There was considerable difference between minimum and maximum estimates for each Vocational Education program; greatest difference occurs for distributive (less than 29,500 versus 118,000 persons) and trade and industrial (115,000 versus 222,000 persons). Overall, the maximum need for training in occupations and industries appropriate for Vocational Education was about 70 percent of all those in need of training; this amounts to about 518,000 persons in 1977.
- The largest volume of need was for job training appropriate for trade and industrial and business and office programs for persons 16 years of age or older in Minnesota. Considering the maximum estimates, there was also a large volume of need for training appropriate for trade and industrial programs.
- The need for training for occupations not appropriate for Vocational Education varied from about 17 percent at a minimum to 39 percent at a maximum of all job training need.
- The most prevalent reason for training appropriate for Vocational Education was to remain qualified at present job; about 219,000 persons would be estimated to give this reason in 1977. The next most frequent reasons, in decreasing order, were prepare for unrelated job and prepare for a job promotion.
- Occupational categories with most prevalent need for training appropriate for Vocational Education were professional/technical, craftsworkers and clerical workers; these occupations were those for which more training was needed by an estimated 94,000, 89,000, and 77,000 persons, respectively, in 1977.
- About 40 percent of those wanting job training appropriate for Vocational Education were willing to pay a non-refundable fee to hold a place in a course; this amounted to an estimated 212,000 persons in 1977. Similarly, about 45 percent were willing to enroll within the next two months from the time of the survey.
- Winter and fall were the most desirable time of year for attending a

training program appropriate for Vocational Education; about one-half the persons found winter desirable. Two to four days per week, nights and three to five hours per day were other most desirable scheduling characteristics for programs.

- In-school and on-the-job were the most preferred instructional media; on-the-job was preferred at a higher rate for training appropriate for Vocational Education than for non-vocational education.
- Work takes too much time was the most frequent hindrance to enrolling in training appropriate for Vocational Education; about 129,000 persons were estimated to have this hindrance in 1977.
- About 30 percent of those wanting training appropriate for Vocational Education and having cost of program as a hindrance to enrolling were definitely willing to borrow money to attend a job-training program.
- Most frequent choices of fees able to pay to attend part-time training appropriate for Vocational Education was \$7.50-\$14.99 and \$14.00-\$29.99 per course. Most prevalent choice of distance able to travel for part-time training was 1-10 miles.
- For full-time training appropriate for Vocational Education, the most frequent choice of fees able to pay was none and \$7.50-\$14.99 per week; these categories were followed closely by less than \$7.50 and \$15.00-\$29.99 per week. Concerning distance able to travel, 1-10 miles was again the most prevalent choice.
- About 90 percent of those needing job training appropriate for Vocational Education stated that the purpose of Vocational Education was training for a job or work. About two-thirds had a positive or very positive attitude toward Vocational Education.

Chapter VI

USES AND LIMITATIONS

No attempt will be made to summarize the information present in the many tables in this report, reference should be made to the end of each chapter for a listing of selected observations. This chapter will suggest potential applications of the information and discuss cautions which should be observed in making these applications.

USES OF INFORMATION

Three major uses of information on the self perceived needs of people for job training are in the functions of planning, approving, and implementing job training programs. These functions are often carried out by different groups of individuals. Planners can use the information in defining the full array of alternative programs which are needed. Further, they can use the information in defining the alternative programs (e.g., what are the characteristics of a "program", how are the needs sub-divided into mutually exclusive and exhaustive parts). Planners must define programs in order to array them and estimate what will likely happen if the program is implemented, how the program can be accomplished and how much it will cost. As already mentioned, the information about perceived needs can be used in deciding "how" to deliver the program and, thereby, in estimating its likely cost. Information on how many want the program also has implications for cost. The planners, as thought of here, are those who staff state departments of education, prime sponsor agencies, economic development commissions, and administrators in local educational agencies (e.g., area vocational technical institutes, secondary schools, community colleges, universities).

The second group of users is those who function to approve job training programs. They use the information to set priorities among the array of alternative programs. In this function, priorities are weighted against resources and "go/no go" decisions are made. The information on perceived needs of people for various programs can be used as indicators of relevance

and potential utilization. The approvers are concerned with the "value" of the program and its cost. Several factors are important in determining "value", and one is the "acceptance" of the program by those who are to benefit from it. Perceived needs of potential consumers can be used as a measure of acceptance. The "approvers" are those who are members of the legislative, executive, and judicial branches of government; and members of school boards; college and university boards; state boards; and economic development commissions.

The third group of users are those who function to implement job training services. Their job is to decide specifically how the programs are to be operated and be active in their operation and management. The decision of how to implement is uniquely characteristic to each different situation in terms of time, place, and the individuals involved. "Implementers" can use the information in deciding how to make the programs accessible and relevant to potential participants. The concern is with selecting the right time, place, subject matter, and instructor. Perhaps the use of the information on perceived needs of people for additional job training is more tenuous for this function than for the two previously described. The reason is not that the information itself is of less use but that there are many other types of information which may be equally important (e.g., what facilities are available, quality of instructor available, how many students will actually show up, fit with programs offered in the recent past). The "implementers" are usually the instructors and their immediate superiors (e.g., department heads in educational institutions, directors of continuing education programs).

LIMITATIONS OF INFORMATION

In applying the information on the self-perceived needs of people for additional job training, the limitations created by the nature of the information itself must be kept in perspective. The following list of limitations is intended as "consumer protection information" for those contemplating the use of information present in this report:

1. The information provided is a self-perception of need; it depends

on the current knowledge and understanding of the respondents concerning their need for additional job training of interest, and the benefits to be obtained by attending a training program.

2. The intensity of perceived need is a measure of expected utility for which there is no common scale which can be applied uniformly to and by each respondent. Only ordinal measurement and analysis are possible without major assumptions.
3. The need as previously stated, is only perceived. Certainly, there may be individuals in the population who "need" job training but do not recognize this need for one of several reasons (e.g., don't know the benefit, are not aware of their problem).
4. Perceived need is a measure of interest in a particular kind of additional job training and does not mean that the individual would always actually enroll or attend if the program were offered.
5. The study uses a sample of the population of an area at a given time of year in a particular year. Depending on sample size relative to population size and the completeness of response, an error of estimate is expected in perceived needs depending on season and year. The population for this study did not include institutionalized persons (i.e., those in hospitals, penal institutions, dormitories); it is estimated that about 3 percent of Minnesota's population, age 16 and over resides in institutions of this kind.
6. The information on perceived needs of people is most useful in conjunction with other equally important information (e.g., demands of industry, program efficiency, program quality). If this other information is not available at the same time, the usefulness of the perceived need for job training may be hampered.

While these limitations do not negate use of the information in this report, they do provide a means of enhancing "responsible" application to decision making by planners, approvers and implementers.

Appendix I SELECTED QUESTIONNAIRE ITEMS

This list of questions is not the actual questionnaire used in the survey. The list is a selection of pertinent items from the actual questionnaire. It is provided for the purpose of understanding the tables in this report.

1. AGE Your age is: _____
OF YEARS

2. SEX (Do not ask)

3. REGION _____

4. INCOME Which category on this card represents the total income for this family in the past 12 months. This includes wages and salaries, net income from business or farm, pensions, dividends, interest, rent, social security payments, and any other income received by members of this family. (Show flash card A) (Include related family members 14+ years)

CIRCLE ONE

A. Under \$ 3,000	01
B. 3,000 - 3,999	02
C. 4,000 - 4,999	03
D. 5,000 - 5,999	04
E. 6,000 - 6,999	05
F. 7,000 - 7,999	06
G. 8,000 - 9,999	07
H. 10,000 - 12,499	08
I. 12,500 - 14,999	09
J. 15,000 - 17,499	10
K. 17,500 - 19,999	11
L. 20,000 - 24,999	12
M. 25,000 - 29,999	13
N. 30,000 - 39,999	14
O. 40,000 - 49,999	15
P. 50,000 and over	16

5. QUESTIONS USED FOR THE CALCULATION OF PERSONAL INCOME:

A. What is the pay rate for your job (before taxes and other deductions are made)?

(What is your income after expenses in your business, professional practice or farm?)

\$ _____ . _____ per
DOLLARS CENTS

CIRCLE ONE

Hour	1
Day	2
Week	3
Bi-Weekly	4
Twice a Month	5
Monthly	6
Year	7
Other SPECIFY _____	8

5. B. In 1976, how many weeks did you work either full-time or part-time, not counting work around the house? Include paid vacation and paid sick leave.

OF WEEKS

Did not work in 1976	1
1 to 51 weeks	2
52 weeks	3

6. QUESTIONS USED FOR THE CALCULATION OF EMPLOYMENT STATUS:

- A. What were you doing most of last week: working, keeping house, going to school or something else?

Working	1
With a job, but not at work	2
Looking for work	3
Keeping house	4
Going to school	5
Unable to work	6
Retired	7
Other SPECIFY _____	8

- B. Did you do any work at all last week, not counting work around the house?

Yes	1
No	2

- C. Did you work without pay last week in a family business or farm?

Yes	1
No	2

- D. Did you have a job or business from which you were temporarily absent or on layoff last week?

Yes	1
No	2

6. E. For what reason were you absent from work last week?

New job begins in 30 days	1
Layoff	2
Own illness	3
On vacation	4
Bad weather	5
Labor dispute	6
Other SPECIFY _____	7

F. How many hours did you work last week at all jobs?

OF HOURS

G. Have you been looking for work during the last four weeks?

Yes	1
No	2

H. Is there any reason why you could not take a job last week?

Yes	1
No	2

7. EDUCATIONAL ATTAINMENT

The highest grade you have completed is:

None	1
Some elementary (Grades 1-7)	2
Completed elementary (Grade 8)	3
Some high school (Grades 9-11)	4
Completed high school (Grade 12)	5
Some college (Grades 13-15)	6
College completed (Grade 16)	7
Graduate or professional school	8

8. For whom did you work (on your principal job)?

NAME OF COMPANY, BUSINESS, ORGANIZATION OR OTHER EMPLOYER

9. What kind of business or industry is that?

(E.G., TV AND RADIO STATION, AUTO ASSEMBLY PLANT, RETAIL SHOE STORE)

10. What kind of work were you doing?

(E.G., ELECTRICAL ENGINEER, FARMER, TYPIST)

11. What were your most important activities or duties?

(E.G., TYPES, SELLS CARS, FINISHES CONCRETE)

12. In the next 12 months do you want or plan to take (more) job-related training?

Yes	1
Maybe	2
No	3

13. Here is a list of reasons why some people plan or want to take job-related training. Which one best describes your reason for wanting or planning to take more job-related training in the next 12 months?

CIRCLE ONE

A. Prepare for a first job	1
B. Prepare for a job which is unrelated to a job you have or have had	2
C. Prepare to re-enter a job similar to one you have had in the past	3
D. Prepare for a job promotion or advancement	4
E. Prepare to do better at or remain qualified for your present job	5
F. Other SPECIFY _____	6
G. None of the above	7

14. What is the job or occupation for which you want more training or education in the next 12 months?

SPECIFY OCCUPATION	Do not know	9	9	9
	Not specific to single job	9	9	8

15. In what type of business or industry do you want to be a _____?
(READ OCCUPATION GIVEN IN Q. 14)

TYPE OF BUSINESS OR INDUSTRY
(E.G., TV AND RADIO STATION, AUTO ASSEMBLY PLANT, RETAIL SHOE STORE)

Do not know	9	9	9
Not any specific industry	9	9	8

16. Are any of the following reasons likely to keep you from enrolling in a job-related training program in the next 12 months?

- A. ASK ONLY IF R WORKS
Work takes too much time?

Yes	1
No	2

- B. Family obligations?

Yes	1
No	2

- C. Transportation problems?

Yes	1
No	2

- D. Lack of information about programs?

Yes	1
No	2

- E. Cost of program?

Yes	1
No	2

17. Would you borrow money in order to be able to attend?

Yes	1
No	2
Maybe	3

18. Would you seek a part-time job in order to be able to attend?

Yes	1
No	2
Maybe	3

19. If you were to attend a job-related training program, how many days per week could you devote to the program?

1 day a week	1
2-4 days a week	2
5 or more days a week	3

20. How many hours per day could you devote to the program?

2 hours or less	1
3-5 hours	2
6 hours or more	3

21. If you were to attend a full-time training program in a public school -- one that took 30 hours a week, 5 days a week for several months -- how much tuition or fees would you be able to pay per week?

A. None	1
B. Less than \$7.50 per week	2
C. \$7.50 to \$14.99 per week	3
D. \$15.00 to \$29.99 per week	4
E. \$30.00 to \$45.00 per week	5
F. More than \$45.00 per week	6

22. How far would you be able to travel for a full-time program:

1-10 miles	1
11-20 miles	2
21-30 miles	3
Over 30 miles	4

23. If you were to attend a part-time program in a public school -- one that involved three evening hours once a week, for ten weeks -- how much tuition or fees would you be willing to pay for the course:

A. None	1
B. Less than \$7.50 per course	2
C. \$7.50 to \$14.99 per course	3
D. \$15.00 to \$29.99 per course	4
E. \$30.00 to \$45.00 per course	5
F. More than \$45.00 per course	6

24. How far would you be able to travel for a part-time program:

CIRCLE ONE

1-10 miles	1
11-20 miles	2
21-30 miles	3
Over 30 miles	4

25. If you were to attend a job-related training program, which times of year would be convenient:

CIRCLE AS MANY AS APPLY

Spring	1
Summer	1
Fall	1
Winter	1

26. Would days, nights or weekends be convenient?

CIRCLE AS MANY AS APPLY

Days	1
Nights	1
Weekends	1

27a. Are you interested enough in more job-related training to look through and read specific information about available programs?

Yes	1
No	2

27b. Are you interested enough to list your name as a potential student?

Yes	1
No	2

27c. Are you interested enough to attend a meeting with other interested individuals to help plan a course or program?

Yes	1
No	2

27d. Are you interested enough to recruit others to enable the class to be offered?

Yes	1
No	2

- 27e. Are you interested enough to pay a \$5.00 non-refundable fee in order to hold a place for yourself in a course?

Yes	1
No	2

28. If the job training program of your choice were available, how soon within the next 12 months would you want to enroll?

OF MONTHS

29. Do you have any of the following handicaps which might make you hesitate to attend a job-related training program:

READ EACH REASON

	Yes	No
A. Deafness	1	2
B. Hard of hearing	1	2
C. Blindness	1	2
D. Partially blind	1	2
E. Physically handicapped	1	2
F. English as a second language	1	2
G. Difficulty reading	1	2
H. Difficulty writing	1	2
I. Difficulty with basic arithmetic skills	1	2
J. Other SPECIFY _____	1	2

30. If you were to enroll in job-related training, how would you prefer to receive instruction:

CIRCLE ONE

A. In school	1
B. On-the-job	2
C. Educational television	3
D. Radio	4
E. Correspondence	5
F. Other SPECIFY _____	

31. Do you want more education for hobbies or special interests for any of the following reasons:

CIRCLE ONE

Better use of your leisure time	1
Save money by doing things yourself	2
General self-improvement	3
Other SPECIFY _____	4
Do not want more hobby or special interest education	5

32. What type of program are you most interested in taking?

CIRCLE ONE

A. Home-related skills (examples: quilting, flower arrangement, child care, gourmet cooking, sewing)	1
B. Arts and crafts (examples: oil painting, art, leather tooling)	2
C. Music (examples: guitar, banjo, piano)	3
D. Recreation (examples: camping, bridge, dancing)	4
E. Basic skills (examples: refresher math, basic English)	5
F. Technical (examples: home remodeling, auto repair, plumbing, electrical wiring)	6
G. Liberal arts (examples: history, economics, foreign language)	7
H. Other SPECIFY _____	8

33. What specific type of program related to the home would be of most interest?

CIRCLE ONE

A. Family life (examples: parenting, self-awareness, living single)	1
B. Child development (examples: growth of children, guiding children's behavior, activities for children)	2
C. Consumer education (examples: home budgeting, buy or not to buy, consumer protection)	3
D. Housing (examples: rent or buy, chair caning, decorating, upholstery)	4
E. Foods and nutrition (examples: meal planning, gourmet cooking)	5
F. Clothing and textiles (examples: sewing, altering, quilting)	6
G. Other SPECIFY _____	7

34. If a friend asked you to describe the purpose of vocational education what would you say?

Training for a job or work	1
Other SPECIFY _____	2

35. How do you feel about vocational education? To what extent do you agree or disagree with the following statements about vocational education?

Do you: A. Strongly agree
 B. Agree
 C. Disagree
 D. Strongly disagree OR
 E. Do not know

	A	B	C	D	E
A. Vocational education is for those not smart enough to go to college.	1	2	3	4	5
B. Vocational education is for those who cannot afford much money for an education.	1	2	3	4	5
C. Vocational education prepares people for good jobs.	1	2	3	4	5
D. Vocational education is for somebody else rather than me.	1	2	3	4	5
E. Vocational education is usually dull and not interesting.	1	2	3	4	5
F. Everybody should have some vocational education.	1	2	3	4	5
G. Public tax dollars should be used to support vocational education.	1	2	3	4	5
H. College education leads to better jobs than vocational education.	1	2	3	4	5
I. Training offered in school is usually more valuable in the long run than training on-the-job.	1	2	3	4	5
J. Vocational education is of little use for activities other than work.	1	2	3	4	5

Appendix II
SAMPLING ERROR ESTIMATES

SAMPLING ERROR ESTIMATES

The estimates in this report are based on data collected during April, 1977, through direct interviews and returned mail questionnaires with persons living in housing units in Minnesota. Approximately 4,530 occupied housing units were selected for interview. Within each household, a responsible person, aged 16 or older, was interviewed for demographic characteristics of all household members. From the listing of household members 16 years of age and over, one of them was objectively designated as the respondent for an indepth interview on labor force status and interest in job training. No substitution was made if, after repeated calls, no one was at home or if the designated respondent for the individual interview was not at home or refused to be interviewed. Approximately 96 percent of the households were interviewed for household data, and of these, 98.8 percent were interviewed for individual labor force data. Of the 4,661 persons eligible for the short self-administered job-training questionnaire, 78 percent responded.

THE SAMPLE

The Minnesota state sample was designed to produce estimates for a broad spectrum of demographic and socio-economic characteristics of Minnesota's household population. The sample design was modeled after the proven multi-stage area probability designs which have long been used by the U.S. Bureau of the Census and University of Michigan's Survey Research Center for survey research at the National level.

The selection process was performed in two stages and assigned every year-round housing unit in Minnesota an equal probability of being selected for interview. In the first stage of selection, sample counties were chosen with a probability proportional to number of year-round housing units. Groups of year-round housing units referred to as clusters were then selected from each sample county.

The resulting sample was termed "complex" and was not "random" in the true sense of the term. Nonetheless, the sample did meet the statistically more important criterion of assigning to each element of the population an

equal probability of selection. In selecting the year-round housing unit with equal probability, all items uniquely associated with the selected unit were also chosen with equal probability (children, telephones, microwave ovens, etc.).

Estimates of sample error calculated from the survey data provided a general indicator of the precision with which the design measured characteristics of the survey population. The following text and tables provide a summary of the sampling error for the Minnesota Household Survey results used in this report.

SOURCES OF ERROR

Sample data were subject to errors arising from several sources. Among these were sampling errors, coding or processing errors, noncoverage, response and reporting errors, and nonresponse.

- Noncoverage. A bias was introduced by excluding persons living in institutions or group quarters from the data collection process. A very small bias may exist due to the failure to identify all housing units in the selected sample cluster.
- Response and reporting errors. Errors caused by interviewers, respondents, or both may arise from variations in wording of questions or from faulty questionnaire design. This study's interviewers were chiefly part-time workers, although the majority were persons who had had survey experience. They participated in an intensive two-day training, preceded by home-study training. Moreover, through editing of their completed questionnaires, observation during enumeration, and a systematic reinterview of part of their assignments by supervisory staff, any errors or deficiencies were brought directly to their attention and corrected. In spite of these controls, interviewers may not have always asked the questions in the prescribed fashion. This factor, in addition to the unwillingness of some respondents to report accurately, may result in some errors or lack of uniformity in the results.
- Nonresponse. The Minnesota Household Survey enjoyed response rates in

excess of 96 percent. Consequently, nonresponse bias should be virtually nonexistent for these data. The Vocational Education Supplement data with a 78 percent response rate has the potential for nonresponse bias depending on the assumptions one makes concerning the nature of the nonrespondent group. In this report, all nonrespondents to this Supplement were assumed to have a "No" response to the question of need for more job-related training.

- Coding error. The questionnaires used in this survey were almost entirely pre-coded, with appropriate responses being circled by the interviewer. Through a 100 percent check-coding process, detected errors were corrected. A 100 percent verification was also used throughout keypunching of the data. In addition, an elaborate computer editing process was designed to detect inconsistencies and inappropriate responses not found during the manual editing and coding stages. Although there was close control on all phases of processing, some errors were inevitable in an operation of this type and magnitude. However, the net error is likely to be negligible.
- Sampling error. With a probability design such as that used for this survey, sampling errors can be approximated from the sample itself. A measure of sampling variability indicates the range of difference that may be expected because only a sample of the population was surveyed. Sampling error, which should be distinguished from bias, is composed of several factors. The majority of sample error results from the distribution properties of the sample itself. A portion of the error in the sample data results from the variability among interviewers and coders.

SAMPLING ERROR TABLES

The sampling error tables which follow are tailored to specific tables of this report. The size of the sampling error for percentage and population estimates was based on the size of the sample relative to the population and on the proportion of the population fitting a particular category of interest. The population in this report is defined as non-institutionalized residents of Minnesota, age 16 and over.

The error estimates are shown in Tables 68-70 and refer to tables in the report as specified. Error estimates are given for the percentage estimates in the respective tables. Enter the error tables by reading down the column labeled "Estimated Percentage" to find the exact percentage closest to the percentage estimate for which one wants to determine an error range. After locating the appropriate percentage value in the first column, read across to obtain the error range. The second column, labeled "Estimated Error" provides the information for determining the error range; the range can be calculated by adding the estimated error to the percentage estimate to get an upper level and subtracting the estimated error to get a lower level. Upper and lower levels for the error range of the estimated percentages shown in the tables are given in the fourth column. As an example, if one wishes to check the sampling error on a percentage estimate of 22.3 percent taken from Chapter III, Tables 1-21, the appropriate table would be Table 68. Looking down the first column of Table 68, the closest percentage to 22.3 is 20.0 percent. Reading across for 20.0 percent, the estimated error is 1.3 percent. The error range can then be calculated by adding 1.3 to 22.3 and subtracting 1.3 from 22.3; the resulting range is 21.0 to 23.6 percent. The interpretation of this range is that the probability that the true percentage estimate in this example lies within a range of 21.0 to 23.6 percent is approximately 95 percent or greater. The reason for the 95 percent or greater probability is because this probability level was chosen in calculating the error estimates in the tables. Choosing a higher probability level would result in larger range and conversely a lower probability level would result in a smaller range. The 95 percent level is a common level chosen for sample survey data.

Size of sampling error in population estimates can be derived from the estimated error for percentage estimates by simply multiplying the population estimate by the estimated error percentage. For illustration, if the population estimate in the previous example was 350,000, then the estimated error would be .013 times 350,000 or 4550. The error range at the 95 percent level of confidence would then be 350,000 - 4550 and 350,000 + 4550 or 345,450 - 354,550.

The third column, labeled "Percent Error", in Tables 68-70 provides a description of the relative error in a particular estimate. For example in

Table 68, the 1.3 percent estimated error for an estimated percentage of 20.0 represents a 6.5 percent error, plus or minus, at the 95 percent level of confidence. The 6.5 percent is derived by dividing 1.3 by 20.0 and multiplying by 100. The percent error decreases as the estimated percentage increases.

Table 68

Sampling Errors for
Chapter III, Tables 1-21

Estimated Percentage	Estimated Error	Percent Error	Range of Percentage Estimates 95 Times Out of 100
0.5	.2	40.0	.3 - .7
1.0	.3	30.0	.7 - 1.3
2.0	.5	25.0	1.5 - 2.5
5.0	.7	14.0	4.3 - 5.7
7.5	.8	10.7	6.7 - 8.3
10.0	.9	9.0	9.1 - 10.9
15.0	1.1	7.3	13.9 - 16.1
20.0	1.3	6.5	18.7 - 21.3
30.0	1.5	5.0	28.5 - 31.5
40.0	1.6	4.0	38.4 - 41.6
50.0	1.6	3.2	48.6 - 51.6
60.0	1.6	2.7	58.4 - 61.6
70.0	1.5	2.1	68.5 - 71.5
80.0	1.3	1.6	78.7 - 81.3
85.0	1.1	1.3	83.9 - 86.1
90.0	.9	1.0	89.1 - 90.9
92.5	.8	.9	91.7 - 93.3
95.0	.7	.7	94.3 - 95.7
98.0	.5	.5	97.5 - 98.5
99.0	.3	.3	98.7 - 99.3
99.5	.2	.2	99.3 - 99.7

Table 69

Sampling Errors for
Chapter IV, Tables 22-43 and
Chapter V, Tables 49-67

Estimated Percentage	Estimated Error	Percent Error	Range of Percentage Estimates 95 Times Out of 100
0.5	.4	80.0	.1 - .9
1.0	.6	60.0	.4 - 1.6
2.0	.8	40.0	1.2 - 2.8
5.0	1.2	24.0	3.8 - 6.2
7.5	1.5	20.0	6.0 - 9.0
10.0	1.7	17.0	8.3 - 11.7
15.0	2.0	13.3	13.0 - 17.0
20.0	2.3	11.5	17.7 - 22.3
30.0	2.6	8.7	27.4 - 32.6
40.0	2.8	7.0	37.2 - 42.8
50.0	2.9	5.8	47.1 - 52.9
60.0	2.8	4.7	47.2 - 62.8
70.0	2.6	3.7	67.4 - 72.6
80.0	2.3	2.9	77.7 - 82.3
85.0	2.0	2.4	83.0 - 87.0
90.0	1.7	1.9	88.3 - 91.7
92.5	1.5	1.6	91.0 - 94.0
95.0	1.2	1.3	93.8 - 96.2
98.0	.8	.8	97.2 - 98.8
99.0	.6	.6	98.4 - 99.6
99.5	.4	.4	99.1 - 99.9

Table 70

Sampling Errors for
Chapter IV, Tables 44-48

Estimated Percentage	Estimated Error	Percent Error	Range of Percentage Estimates 95 Times Out of 100
.5	0.3	60.0	.2 - .8
1.0	0.4	40.0	.6 - 1.4
2.0	0.6	30.0	1.4 - 2.6
5.0	1.0	20.0	4.0 - 6.0
7.5	1.2	16.0	6.3 - 8.7
10.0	1.3	13.0	8.7 - 11.3
15.0	1.6	10.7	13.4 - 16.6
20.0	1.8	9.0	18.2 - 21.8
30.0	2.0	6.7	28.0 - 32.0
40.0	2.2	5.5	37.8 - 42.2
50.0	2.2	4.4	47.8 - 52.2
60.0	2.2	3.7	57.8 - 62.2
70.0	2.0	2.9	68.0 - 72.0
80.0	1.8	2.3	78.2 - 81.8
85.0	1.6	1.9	83.4 - 86.6
90.0	1.3	1.4	88.7 - 91.3
92.5	1.2	1.3	91.3 - 93.7
95.0	1.0	1.1	94.0 - 96.0
98.0	0.6	.6	97.4 - 98.6
99.0	0.4	.4	98.6 - 99.4
99.5	0.3	.3	99.2 - 99.8

Appendix III
ASSIGNMENT OF OCCUPATION-INDUSTRY COMBINATIONS TO
VOCATIONAL EDUCATION PROGRAMS

The occupation and industry for which the respondents needed training were considered in combination to assign these respondents to vocational education programs. This Appendix details the program assignment for each occupation and industry combination which was indicated by interview respondents. Eight codes were used for vocational education programs; some combinations were assigned to more than one program. Following is a key for the vocational education program codes used:

1. Agriculture
2. Home Economics (Occupational)
3. Business and Office
4. Distributive
5. Health
6. Trade and Industrial
7. Technical
8. Non-Vocational Education

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Accountant	001	No Industry Specified	---	9, 3
Accountant	001	Electronic Computing Equipment	189	9, 3
Accountant	001	Paper Products	329	9, 3
Accountant	001	Mfg - Soap, Cosmetics	358	9, 3
Accountant	001	Mfg, NEC	398	9, 3
Accountant	001	Street, Railways, Bus	408	9, 3
Accountant	001	Farm Products	528	9, 3
Accountant	001	Machinery Equip & Supplies	539	9, 3
Accountant	001	Theater & Motion Pictures	707	9, 3
Accountant	001	Credit Agencies	708	9, 3
Accountant	001	Security, Investment Agencies	709	9, 3
Accountant	001	Insurance	717	9, 3
Accountant	001	Real Estate	718	9, 3
Accountant	001	Business Mgmt, Consulting Services	738	9, 3
Accountant	001	Hospitals	838	9, 3
Accountant	001	Colleges, Universities	858	9, 3
Accountant	001	Accounting, Auditing, Bookkeep Serv.	889	9, 3
Accountant	001	State Public Administration	927	9, 3
Accountant	001	Local Public Administration	937	9, 3
Accountant	001	No Industry Specified	---	8, 3
Accountant	001	No Industry Specified	---	8, 3
Architects	002	Local Public Administration	937	9
Computer Programmers	003	Metal Working Machinery	187	3
Computer Programmers	003	Electronic Computing Equipment	189	3
Computer Programmers	003	Paper, Pulp Products	329	3
Computer Programmers	003	Trucking Services	417	3
Computer Programmers	003	Insurance	717	3
Computer Programmers	003	Computer Programming Services	739	3
Computer Programmers	003	Colleges, Universities	858	3
Computer Programmers	003	State Public Administration	927	3
Computer Programmers	003	No Industry Specified	---	3
Computer Programmers	003	No Industry Specified	---	3
Computer Systems Analyst	004	Mfg Electronic Computing Equipment	189	9
Computer Systems Analyst	004	Mfg Apparel & Accessories	319	9
Computer Systems Analyst	004	Mfg, NEC	398	9
Computer Systems Analyst	004	Educational Services, NEC	867	9
Computer Specialists, NEC	005	Metal Mining	047	9
Computer Specialists, NEC	005	Not Specified Mfg Industries	398	9
Computer Specialists, NEC	005	No Industry Specified	---	9

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Aeronautical/Astronautical Engineers	006	Air Transportation	427	9
Aeronautical/Astronautical Engineers	006	No Industry Specified	---	9
Chemical Engineers	010	Misc Fabricated Metal Products	168	9
Chemical Engineers	010	Not Spec Chemicals & Allied Products	369	9
Chemical Engineers	010	Comm'l Research, Develop & Test Labs	729	9
Civil Engineers	011	Metal Mining	047	9
Civil Engineers	011	Gen'l Contr Except Building	068	9
Civil Engineers	011	Not Specified Construction	077	9
Civil Engineers	011	Electric-Gas Utilities	468	9
Civil Engineers	011	Local Public Administration	937	9
Electrical & Electronic Engineers	012	Office & Acctg Machines	188	9
Electrical & Electronic Engineers	012	Optical & Health Service Supplies	247	9
Electrical & Electronic Engineers	012	Misc Papers & Pulp Products	329	9
Electrical & Electronic Engineers	012	Telephone (Wire & Radio)	448	9
Electrical & Electronic Engineers	012	Electric Light & Power	467	9
Electrical & Electronic Engineers	012	Business Services, NEC	748	9
Electrical & Electronic Engineers	012	Electric Repair Shops	758	9
Electrical & Electronic Engineers	012	No Industry Specified	---	9
Industrial Engineers	013	Engines & Turbines	177	9
Industrial Engineers	013	Not Spec Elec Mach, Equip & Supplies	209	9
Industrial Engineers	013	Motor Vehicle & Equipment	219	9
Industrial Engineers	013	Not Spec Mfg Industries	398	9
Industrial Engineers	013	Insurance	717	9
Mechanical Engineers	014	No Industry Specified	---	9
Mechanical Engineers	014	Gen'l Building Contractors	067	9
Mechanical Engineers	014	Not Spec Construction	077	9
Mechanical Engineers	014	Not Spec Machinery	198	9
Mechanical Engineers	014	Not Spec Mfg. Industries	398	9
Mechanical Engineers	014	Engineering & Architectural Services	888	9
Mining Engineers	020	Metal Mining	047	9
Engineers, NEC	023	Electronic Computing Equipment	189	9
Engineers, NEC	023	Motor Vehicles & Equipment	219	9
Engineers, NEC	023	Engineering & Architectural Services	888	9
Foresters & Conservationists	025	No Industry Specified	---	9, 1
Foresters & Conservationists	025	Forestry	027	9, 1
Foresters & Conservationists	025	Fisheries	028	9, 1
Foresters & Conservationists	025	State Public Administration	927	9, 1
Foresters & Conservationists	025	No Industry Specified	---	9, 1

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Home Management Advisors	026	No Industry Specified	---	9
Lawyers	031	No Industry Specified	---	9
Lawyers	031	Legal Services	849	9
Lawyers	031	State Public Administration	927	9
Lawyers	031	Local Public Administration	937	9
Lawyers	031	No Industry Specified	---	9
Librarians	032	Elementary & Secondary Schools	857	9
Librarians	032	Colleges & Universities	858	9
Librarians	032	Libraries	859	9
Agricultural Scientists	042	Ag Production	017	9
Agricultural Scientists	042	Ag Services, Except Horticulture	018	9
Agricultural Scientists	042	Horticulture Services	019	9
Biological Scientists	044	No Industry Specified	---	9
Biological Scientists	044	Museums, Art Galleries & Zoos	869	9
Chemists	045	Misc Paper & Pulp Products	329	9
Chemists	045	Industrial Chemicals	347	9
Chemists	045	Not Spec Chem & Allied Products	369	9
Chemists	045	Comm'l Research, Develop & Test Lab	729	9
Chemists	045	No Industry Specified	---	9
Geologists	051	Metal Mining	047	9
Geologists	051	Coal Mining	048	9
Physicists & Astronomers	053	No Industry Specified	---	9
Life & Physical Scientists, NEC	054	No Industry Specified	---	9
Personnel/Labor Relations Workers	056	No Industry Specified	---	9
Personnel/Labor Relations Workers	056	Elec Computing Equipment	189	9
Personnel/Labor Relations Workers	056	Elec Machin, Equip & Supplies, NEC	208	9
Personnel/Labor Relations Workers	056	Telephone	448	9
Personnel/Labor Relations Workers	056	Business Mgmt Consulting Services	738	9
Personnel/Labor Relations Workers	056	Hospitals	838	9
Personnel/Labor Relations Workers	056	State Public Administration	927	9
Personnel/Labor Relations Workers	056	Not Specified	998	9
Chiropractors	061	Offices of Chiropractors	837	9
Dentists	062	Offices of Dentists	829	9
Optometrists	063	Misc Retail Stores	697	9
Optometrists	063	Offices of Health Practitioners, NEC	847	9
Pharmacists	064	No Industry Specified	---	9
Pharmacists	064	Drug Stores	677	9
Pharmacists	064	Hospitals	838	9

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Physicians, Medical & Osteopathic	065	Offices of Physicians	828	9
Physicians, Medical & Osteopathic	065	Hospitals	838	9
Veterinarians	072	Ag Services, Except Horticulture	018	9
Dietitians	074	Hospitals	838	9
Dietitians	074	Convalescent Institutions	839	9
Registered Nurses	075	No Industry Specified	---	5, 9
Registered Nurses	075	Furniture & Fixtures	118	5, 9
Registered Nurses	075	Private Households	769	5, 9
Registered Nurses	075	Offices of Physicians	828	5, 9
Registered Nurses	075	Hospitals	838	5, 9
Registered Nurses	075	Convalescent Institutions	839	5, 9
Registered Nurses	075	Health services, NEC	848	5, 9
Registered Nurses	075	Elementary & Secondary Schools	857	5, 9
Registered Nurses	075	Colleges and Universities	858	5, 9
Registered Nurses	075	Federal Public Administration	917	5, 9
Registered Nurses	075	Local Public Administration	937	5, 9
Registered Nurses	075	No Industry Specified	---	5, 9
Registered Nurses	075	No Industry Specified	---	5, 9
Therapists	076	No Industry Specified	---	9, 5
Therapists	076	Offices of Physicians	828	9, 5
Therapists	076	Hospitals	838	9, 5
Therapists	076	Convalescent Institutions	839	9, 5
Therapists	076	Health Services, NEC	848	9, 5
Therapists	076	Elementary & Secondary Schools	857	9, 5
Therapists	076	No Industry Specified	---	9, 5
Therapists	076	No Industry Specified	---	9, 5
Clinical Lab Technologists/Technicians	080	Offices of Physicians	828	5
Clinical Lab Technologists/Technicians	080	Hospitals	838	5
Clinical Lab Technologists/Technicians	080	Health Services, NEC	848	5
Clinical Lab Technologists/Technicians	080	Misc Professional & Related Services	897	5
Dental Hygienists	081	Offices of Dentists	829	5
Dental Hygienists	081	Health Services, NEC	848	5
Dental Hygienists	081	Colleges & Universities	858	5
Health Record Technologists & Technic	082	Hospitals	838	3
Health Record Technologists & Technic	082	Health Services, NEC	848	3
Radiologic Technologists & Technic	083	Hospitals	838	5
Health Technologists & Technic, NEC	085	Agriculture Production	017	1
Health Technologists & Technic, NEC	085	Ag Services, Except Horticulture	018	1

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Health Technologists & Technic, NEC	085	Hospitals	838	5
Health Technologists & Technic, NEC	085	Convalescent Institutions	839	5
Health Technologists & Technic, NEC	085	Elementary & Secondary Schools	857	5
Clergymen	086	Religious Organizations	877	9
Religious Workers, NEC	090	Religious Organizations	877	9
Economists	091	No Industry Specified	---	9
Psychologists	093	Hospitals	838	9
Psychologists	093	Religious Organizations	877	9
Psychologists	093	Misc Professional & Related Services	898	9
Psychologists	093	No Industry Specified	---	9
Psychologists	093	No Industry Specified	---	9
Sociologists	094	Local Public Administration	937	9
Social Workers	100	Hospitals	838	9
Social Workers	100	Elementary & Secondary Schools	857	9
Social Workers	100	Welfare Services	878	9
Social Workers	100	State Public Administration	927	9
Social Workers	100	Local Public Administration	937	9
Social Workers	100	No Industry Specified	---	9
Recreation Workers	101	Convalescent Institutions	839	9
Recreation Workers	101	Colleges & Universities	858	9
Health Specialties Teachers	113	Colleges & Universities	858	9
Psychology Teachers	114	Elementary & Secondary Schools	857	9
Sociology Teachers	121	Elementary & Secondary Schools	857	9
Art, Drama & Music Teachers	123	Colleges & Universities	858	9
Coaches & Phy Ed Teachers	124	Colleges & Universities	858	9
Trade, Industrial & Technical Teacher	134	Education Services, NEC	867	9
Misc Teachers, College & University	135	Colleges & Universities	858	9
Teachers, College & U, Subj Not Spec	140	Colleges & Universities	858	9
Adult Ed Teachers	141	Health Services, NEC	848	9
Adult Ed Teachers	141	Elementary & Secondary Schools	857	9
Adult Ed Teachers	141	Ed Services, NEC	867	9
Adult Ed Teachers	141	State Public Administration	927	9
Adult Ed Teachers	141	No Industry Specified	---	9
Adult Ed Teachers	141	No Industry Specified	---	9
Elementary School Teachers	142	No Industry Specified	---	9
Elementary School Teachers	142	Elementary & Secondary Schools	857	9
Elementary School Teachers	142	State Public Administration	928	9
Pre-Kinderg & Kinderg Teachers	143	Elementary & Secondary Schools	857	9
Secondary School Teachers	144	Elementary & Secondary Schools	857	9
Secondary School Teachers	144	Residential Welfare Facilities	879	9

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Teachers, Except College & Univ, NEC	145	Private Households	769	9
Teachers, Except College & Univ, NEC	145	Elementary & Secondary Schools	857	9
Teachers, Except College & Univ, NEC	145	Educational Services, NEC	867	9
Teachers, Except College & Univ, NEC	145	Welfare Services	878	9
Teachers, Except College & Univ, NEC	145	No Industry Specified	---	9
Chemical Technicians	151	Soaps & Cosmetics	358	7
Draftsmen	152	Gen'l Contract Except Building	068	7, 6
Draftsmen	152	Radio, TV & Communication Equipment	207	7, 6
Draftsmen	152	Engineering & Architectural Service	888	7, 6
Draftsmen	152	Misc Professional & Related Service	897	7, 6
Draftsmen	152	No Industry Specified	---	7, 6
Draftsmen	152	No Industry Specified	---	7, 6
Electrical & Electronic Eng Techni	153	No Industry Specified	---	7
Electrical & Electronic Eng Techni	153	Gen'l Building Contract	067	7
Electrical & Electronic Eng Techni	153	Electronic Computing Equipment	089	7
Electrical & Electronic Eng Techni	153	Radio, TV & Communication Equipment	207	7
Electrical & Electronic Eng Techni	153	Photo Equipment & Supplies	248	7
Electrical & Electronic Eng Techni	153	Pulp, Paper & Paperboard Mills	438	7
Electrical & Electronic Eng Techni	153	Misc Paper & Pulp Products	439	7
Electrical & Electronic Eng Techni	153	Not Specified Mfg Industries	398	7
Electrical & Electronic Eng Techni	153	Air Transportation	427	7
Electrical & Electronic Eng Techni	153	Telephone (Wire & Radio)	448	7
Electrical & Electronic Eng Techni	153	Comm'l R & D Testing Labs	729	7
Electrical & Electronic Eng Techni	153	Business Services, NEC	748	7
Electrical & Electronic Eng Techni	153	Elementary & Secondary Schools	857	7
Electrical & Electronic Eng Techni	153	Engineering & Architectural Services	888	7
Electrical & Electronic Eng Techni	153	Federal Public Administration	917	7
Electrical & Electronic Eng Techni	153	State Public Administration	927	7
Electrical & Electronic Eng Techni	153	No Industry Specified	---	7
Electrical & Electronic Eng Techni	153	No Industry Specified	---	7
Industrial Engineering Technicians	154	Not Specified Mfg Industries	398	7
Mechanical Engineering Technicians	155	Electronic Computing Equipment	189	7
Mechanical Engineering Technicians	155	No Industry Specified	---	7
Surveyors	161	No Industry Specified	---	7, 9
Surveyors	161	Engineering & Architectural Services	888	7, 9
Surveyors	161	No Industry Specified	---	7, 9
Engineering & Science Techn, NEC	162	No Industry Specified	---	7
Engineering & Science Techn, NEC	162	Metal Mining	047	7
Engineering & Science Techn, NEC	162	Federal Public Administration	917	7
Engineering & Science Techn, NEC	162	Local Public Administration	937	7

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Engineering & Science Techn, NEC	162	No Industry Specified	---	7
Airplane Pilots	163	Air Transportation	427	6
Airplane Pilots	163	Hotels & Motels	777	6
Airplane Pilots	163	No Industry Specified	---	6
Air Traffic Controllers	164	Air Transportation	427	7
Vocational & Educational Counselors	174	Elementary & Secondary Schools	857	9
Vocational & Educational Counselors	174	Welfare Services	878	9
Vocational & Educational Counselors	174	State Public Administration	927	9
Vocational & Educational Counselors	174	Not Specified	998	9
Actors	175	Radio Broadcasting & TV	447	9
Athletes & Kindred Workers	180	Misc Entertainment & Rec Services	809	9
Authors	181	Misc Professional & Related Services	987	9
Designers	183	Gen'l Building Contract	067	9, 7, 6
Designers	183	Apparel & Accessories	319	9, 2
Designers	183	Printing & Publish, Except Newspaper	339	9, 6
Designers	183	Furniture & Home Furnishing Stores	667	9, 6
Designers	183	Business Management & Consulting Ser	738	7, 9, 3, 6, 2, 1
Designers	183	Misc Professional & Related Services	897	9, 6
Designers	183	No Industry Identified	---	1, 9, 3, 6, 2, 7
Editors & Reporters	184	Electronic Computing Equipment	189	6, 7, 9
Editors & Reporters	184	Newspaper Publishing & Printing	338	4, 9
Editors & Reporters	184	Printing & Publ., Except Newspaper	339	4, 9
Editors & Reporters	184	Radio Broadcasting & TV	447	7, 9
Editors & Reporters	184	Hardware, Plumbing & Heating Supply	537	4, 9
Editors & Reporters	184	No Industry Identified	---	4, 9, 7
Musicians & Composers	185	Business Services, NEC	748	9
Musicians & Composers	185	Theaters & Motion Pictures	807	9
Musicians & Composers	185	Misc Entertainment Services	809	9
Musicians & Composers	185	No Industry Specified	---	6, 9
Musicians & Composers	185	No Industry Specified	---	6, 9
Painters & Sculptors	190	Newspaper Publishing & Printing	338	6, 9, 4
Painters & Sculptors	190	Print & Publish Except Newspaper	339	6, 9, 4
Painters & Sculptors	190	Dept & Mail Order Establishment	609	6, 9, 4
Painters & Sculptors	190	Advertising	727	6, 9, 4
Painters & Sculptors	190	Misc Personal Services	798	6, 9, 4
Painters & Sculptors	190	Misc Professional & Related Services	897	6, 9, 4
Painters & Sculptors	190	No Industry Specified	---	6, 9, 4
Painters & Sculptors	190	No Industry Specified	---	6, 9, 4
Photographers	191	No Industry Specified	---	6, 7
Photographers	191	Newspaper Publishing & Printing	338	6, 7

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Photographers	191	Publish & Print, Except Newspaper	339	6, 7, 9
Photographers	191	Advertising	727	6, 7, 9
Photographers	191	Misc Personal Services	798	6, 7, 9
Photographers	191	No Industry Specified	---	6, 7, 9
Publ Relations Men & Publicity Writers	192	Metal Mining	047	9
Publ Relations Men & Publicity Writers	192	Electronic Computing Equipment	189	9
Publ Relations Men & Publicity Writers	192	Not Specified Mfg Industries	398	9
Publ Relations Men & Publicity Writers	192	Dept & Mail Order Establishments	609	9
Publ Relations Men & Publicity Writers	192	No Industry Specified	---	9
Radio & TV Announcers	193	Radio Broadcasting & TV	447	7, 9
Writers, Artists & Entertainers, NEC	194	Electronic Computing Equipment	189	4, 6, 9, 7,
Writers, Artists & Entertainers, NEC	194	Radio Broadcasting & TV	447	4, 6, 9, 7
Writers, Artists & Entertainers, NEC	194	No Industry Specified	---	4, 6, 9, 7
Writers, Artists & Entertainers, NEC	194	No Industry Specified	---	4, 6, 9, 7
Research Workers, Not Specified	195	Scientists & Controlling Instr	239	9
Research Workers, Not Specified	195	Legal Services	849	9
Research Workers, Not Specified	195	No Industry Specified	---	9
Assessor, Controller & Treasurer, Local	201	Local Public Administration	937	9
Bank Officers & Financial Managers	202	Electronic Machinery, Equip & Supply	208	9, 3, 4
Bank Officers & Financial Managers	202	Misc Mfg Industries	259	9, 3, 4
Bank Officers & Financial Managers	202	Not Specified Mfg Industries	398	9, 3, 4
Bank Officers & Financial Managers	202	Not Specified Retail Trade	698	9, 3, 4
Bank Officers & Financial Managers	202	Banking	707	9, 3, 4
Bank Officers & Financial Managers	202	Insurance	717	9, 3, 4
Buyers, Wholesale & Retail Trade	205	No Industry Specified	---	1, 2, 4
Buyers, Wholesale & Retail Trade	205	Apparel & Accessory Stores, Exc Shoes	657	2, 4
Buyers, Wholesale & Retail Trade	205	Not Specified Retail Trade	698	2, 4
Credit Men	210	Dairy Products	269	1, 4
Health Administrators	212	Offices of Physicians	828	9
Health Administrators	212	Hospitals	838	9
Health Administrators	212	Convalescent Institutions	839	9
Inspectors, Exc Construc, Public Admin	215	Postal Service	907	4, 9
Inspectors, Exc Construc, Public Admin	215	Federal Public Administration	917	4, 9
Managers & Superintendents, Bldg	216	Misc Rec & Entertainment Services	809	4, 9
Managers & Superintendents, Bldg	216	No Industry Specified	---	4, 9
Office Managers, NEC	220	Electronic Computing Equipment	189	3, 9
Office Managers, NEC	220	Telephone (Wire & Radio)	448	3, 9
Office Managers, NEC	220	Telegraph & Misc Communic Services	449	3, 9
Office Managers, NEC	220	Insurance	717	3, 9
Office Managers, NEC	220	Real Estate	718	3, 9

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Office Managers, NEC	220	Legal Services	849	3, 9
Office Managers, NEC	220	Colleges & Universities	858	3, 9
Office Managers, NEC	220	No Industry Specified	---	3, 9
Officials & Administr, Pub Admin, NEC	222	Forestry	027	9
Officials & Administr, Pub Admin, NEC	222	Educ Services, NEC	867	9
Officials & Administr, Pub Admin, NEC	222	Welfare Services	878	9
Officials & Administr, Pub Admin, NEC	222	Federal Public Administration	917	9
Officials & Administr, Pub Admin, NEC	222	State Public Administration	927	9
Officials & Administr, Pub Admin, NEC	222	Local Public Administration	937	9
Officials & Administr, Pub Admin, NEC	222	No Industry Specified	---	9
Officials of Lodges, Societies & Union	223	Non-Profit Membership Organizations	887	9
Postmasters & Mail Superintendents	224	Postal Service	907	9
Purchasing Agents & Buyers, NEC	225	Not Specified Elec Mach Equip/Supply	209	4, 6, 9
Purchasing Agents & Buyers, NEC	225	Street Railways & Bus Lines	408	4, 6, 9
Purchasing Agents & Buyers, NEC	225	Trucking Service	417	4, 6, 9
Purchasing Agents & Buyers, NEC	225	Motor Vehicles & Equipment	507	6, 4, 9
Purchasing Agents & Buyers, NEC	225	Food & Related Products	527	4, 2, 9
Purchasing Agents & Buyers, NEC	225	Apparel Except Shoes Store	657	4, 2, 9
Purchasing Agents & Buyers, NEC	225	Welfare Services	878	2, 9
Restaurant, Cafeteria & Bar Mgmt	230	Eating & Drinking Places	669	9, 6, 2, 4
Restaurant, Cafeteria & Bar Mgmt	230	Hotels & Motels	777	2, 6, 4, 9
Restaurant, Cafeteria & Bar Mgmt	230	No Industry Specified	---	9, 2, 4, 6
Sales Mngrs & Dept Heads, Retail Trade	231	Dept & Mailorder Establishment	609	4, 9
Sales Mngrs & Dept Heads, Retail Trade	231	Misc Gen'l Merchandise Store	627	4, 9
Sales Mngrs & Dept Heads, Retail Trade	231	Retail Bakeries	637	2, 4, 6, 9
Sales Mngrs & Dept Heads, Retail Trade	231	Motor Vehicle Dealers	639	4, 6, 9
Sales Mngrs & Dept Heads, Retail Trade	231	Hshld Appliances, TV & Radio Stores	668	9, 4, 6
Sales Mngrs & Dept Heads, Retail Trade	231	Misc Retail Stores	697	1, 2, 4, 6, 9
Sales Mngrs & Dept Heads, Retail Trade	231	No Industry Specified	---	1, 2, 4, 6, 9
Sales Mngrs & Dept Heads, Retail Trade	231	No Industry Specified	---	1, 2, 4, 6, 9
Sales Managers, Except Retail Trade	233	Paperboard Containers & Boxes	337	4, 6, 9
Sales Managers, Except Retail Trade	233	Newspaper Publishing & Printing	338	4, 6, 9
Sales Managers, Except Retail Trade	233	Insurance	717	4, 9
School Administrators, College	235	Colleges & Universities	858	9
School Administrators, College	235	Educational Services, NEC	867	9
School Admin, Elementary & Secondary	240	Hospitals	838	9
School Admin, Elementary & Secondary	240	Elementary & Secondary Schools	857	9
Managers & Administrators, NEC	245	No Industry Specified	---	1, 2, 9, 4, 5, 6, 7
Managers & Administrators, NEC	245	Agr Services, Except Horticulture	018	1, 0
Managers & Administrators, NEC	245	Metal Mining	047	6, 7, 9, 4

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OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Managers & Administrators, NEC	245	Gen'l Building Contractors	067	4, 6, 9
Managers & Administrators, NEC	245	Special Trade Contractors	069	4, 6, 9
Managers & Administrators, NEC	245	Not Specified Construction	077	1, 4, 6, 9
Managers & Administrators, NEC	245	Other Iron & Steel Industries	147	4, 6, 7, 9
Managers & Administrators, NEC	245	Electronic Computing Equipment	189	4, 6, 7, 9
Managers & Administrators, NEC	245	Motor Vehicles & Equipment - Mfg	219	4, 6, 7, 9
Managers & Administrators, NEC	245	Scientific & Controlling Instruments	239	4, 6, 7, 9
Managers & Administrators, NEC	245	Meat Products	268	1, 4, 9
Managers & Administrators, NEC	245	Grain-Mill Products	279	1, 4, 9
Managers & Administrators, NEC	245	Apparel & Accessories	319	2, 4, 9
Managers & Administrators, NEC	245	Misc Fabricated Textile Products	327	6, 2, 4, 9
Managers & Administrators, NEC	245	Pulp, Paper & Paperboard Mills	328	1, 6, 9, 4
Managers & Administrators, NEC	245	Misc Paper & Pulp Products	329	1, 4, 6, 9
Managers & Administrators, NEC	245	Newspaper Publishing & Printing	338	4, 6, 9
Managers & Administrators, NEC	245	Printing & Publi Except Newspapers	339	4, 6, 9
Managers & Administrators, NEC	245	Drugs & Medicines	357	5, 9, 4
Managers & Administrators, NEC	245	Tanned, Curried & Finished Leather	380	4, 6, 1, 2, 9
Managers & Administrators, NEC	245	Not Specified Mfg Industries	398	1, 2, 4, 6, 9, 7
Managers & Administrators, NEC	245	RR & Railway Express Service	407	4, 6, 9
Managers & Administrators, NEC	245	Trucking Service	417	4, 6, 9
Managers & Administrators, NEC	245	Air Transportation	427	4, 6, 9
Managers & Administrators, NEC	245	Services Incidental to Transport	429	4, 6, 9
Managers & Administrators, NEC	245	Sanitary Services	478	4, 5, 9
Managers & Administrators, NEC	245	Motor Vehicles & Equip - Sales	507	6, 4, 9
Managers & Administrators, NEC	245	Farm Products-Raw Materials-Sales	528	1, 4, 9
Managers & Administrators, NEC	245	Hardware, Plumbing & Htng Supp-Sales	537	1, 4, 6, 9
Managers & Administrators, NEC	245	Mach Equip & Supplies - Sales	539	1, 4, 6, 9
Managers & Administrators, NEC	245	Lumber & Construction Materials-Sales	569	1, 4, 6, 9
Managers & Administrators, NEC	245	Lumber & Bldg Material, Retail	607	1, 4, 6, 9
Managers & Administrators, NEC	245	Hdware & Farm Equip Stores, Retail	608	1, 4, 6, 9
Managers & Administrators, NEC	245	Dept. & Mail Order Establish, Retail	609	4, 9
Managers & Administrators, NEC	245	Grocery Stores, Retail	628	1, 2, 4, 6, 9
Managers & Administrators, NEC	245	Motor Vehicle Dealers, Retail	639	4, 6, 9
Managers & Administrators, NEC	245	Tire, Battery & Access Dealers, Retail	647	4, 6, 9
Managers & Administrators, NEC	245	Gas Service Stations, Retail	648	4, 6, 9
Managers & Administrators, NEC	245	Apparel Stores, Except Shoes, Retail	657	4, 6, 9
Managers & Administrators, NEC	245	Eating & Drinking Places, Retail	669	4, 6, 9
Managers & Administrators, NEC	245	Drug Stores, Retail	677	5, 9, 4
Managers & Administrators, NEC	245	Retail Florists	689	1, 4, 9
Managers & Administrators, NEC	245	Misc Retail Stores	697	1, 2, 4, 6, 7, 9, 5

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Managers & Administrators, NEC	245	Not Specified Retail Trade	698	1, 2, 4, 6, 5, 7, 9
Managers & Administrators, NEC	245	Insurance	717	4, 9
Managers & Administrators, NEC	245	Real Estate Offices	718	4, 9
Managers & Administrators, NEC	245	Computer Programming Services	739	4, 6, 7, 9
Managers & Administrators, NEC	245	Auto Services, Except Repair	749	6, 9, 4
Managers & Administrators, NEC	245	Hotels & Motels	777	4, 6, 9
Managers & Administrators, NEC	245	Beauty Shops	787	2, 4, 6, 9
Managers & Administrators, NEC	245	Misc Entertainment & Recr Services	089	4, 6, 9
Managers & Administrators, NEC	245	Colleges & Universities	858	9
Managers & Administrators, NEC	245	Educational Services, NEC	867	9
Managers & Administrators, NEC	245	Religious Organizations	877	4, 9
Managers & Administrators, NEC	245	Welfare Services	878	9
Managers & Administrators, NEC	245	Nonprofit Membership Organizations	887	4, 9
Managers & Administrators, NEC	245	Engineering & Architectural Services	888	7, 9
Managers & Administrators, NEC	245	Acct, Auditing & Bookkeeping Services	889	3, 4, 9
Managers & Administrators, NEC	245	No Industry Specified	---	1, 2, 3, 4, 5, 6, 7, 9
Managers & Administrators, NEC	245	No Industry Specified	---	1, 2, 3, 4, 5, 6, 7, 9
Advertising Agents & Salesmen	260	Advertising	727	9, 4
Advertising Agents & Salesmen	260	No Industry Specified	---	4, 9
Auctioneers	261	Business Services, NEC	748	1, 4, 9
Demonstrators	262	Business Mgmt & Consulting Services	738	4, 9
Hucksters & Peddlers	264	Direct Selling Establishments	619	4, 9
Insurance Agents, Brokers/Underwriters	265	Banking	707	4, 9
Insurance Agents, Brokers/Underwriters	265	Insurance	717	4, 9
Real Estate Agents & Brokers	270	Real Estate Offices	718	4, 9
Stock & Bond Salesmen	271	Security, Commodity Brokerage/Invest	709	4, 9
Salesmen & Sales Clerks, NEC	280	No Industry Specified	---	4
Salesmen & Sales Clerks, NEC	280	Misc Plastic Products	387	4, 6
Salesmen & Sales Clerks, NEC	280	Telephone (Wire & Radio)	448	4, 6
Salesmen & Sales Clerks, NEC	280	Motor Vehicles & Equipment	507	4, 6
Salesmen & Sales Clerks, NEC	280	Machinery Equipment & Supplies	539	4, 6
Salesmen & Sales Clerks, NEC	280	Petroleum Products	558	4
Salesmen & Sales Clerks, NEC	280	Dept. & Mail Order Establishments	609	4
Salesmen & Sales Clerks, NEC	280	Misc Gen'l Merchandise Stores	627	4
Salesmen & Sales Clerks, NEC	280	Food Stores, NEC	638	1, 4, 2
Salesmen & Sales Clerks, NEC	280	Tire, Battery & Access Dealers	647	4, 6
Salesmen & Sales Clerks, NEC	280	Drug Stores	677	4, 5
Salesmen & Sales Clerks, NEC	280	Misc Retail Stores	697	4
Salesmen & Sales Clerks, NEC	280	Not Specified Retail Trade	698	4
Salesmen & Sales Clerks, NEC	280	Misc Repair Services	759	4

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Salesmen & Sales Clerks, NEC	280	No Industry Specified	---	4
Salesmen & Sales Clerks, NEC	280	No Industry Specified	---	4
Sales Reps, Mfg Industries	281	Motor Vehicles & Equipment	219	4, 6
Sales Reps, Mfg Industries	281	Aircraft & Parts	227	4, 7, 6
Sales Reps, Mfg Industries	281	Misc Paper & Pulp Products	329	4, 6, 1
Sales Reps, Mfg Industries	281	Printing & Publish, Except Newspaper	339	4, 6
Sales Reps, Mfg Industries	281	Not Specified Mfg Industries	398	4, 6
Sales Reps, Wholesale Trade	282	Electrical Goods	529	4, 7, 6
Sales Reps, Wholesale Trade	282	No Industry Specified	---	4
Sales Clerks, Retail Trade	283	Lumber & Bldg Material, Retail	607	4, 6, 1
Sales Clerks, Retail Trade	283	Hardware & Farm Equipment Stores	608	4, 1, 6
Sales Clerks, Retail Trade	283	Dept & Mail Order Establishments	609	4
Sales Clerks, Retail Trade	283	Misc Vehicle Dealers	649	4, 6
Sales Clerks, Retail Trade	283	Apparel Stores, Except Shoes	657	2, 4
Sales Clerks, Retail Trade	283	Furniture & Home Furnishings Stores	667	4, 6, 2
Sales Clerks, Retail Trade	283	Hshld Appliance, TV & Radio Stores	668	4, 6, 2
Sales Clerks, Retail Trade	283	Retail Florists	689	1, 4
Sales Clerks, Retail Trade	283	Misc Retail Stores	697	4
Salesmen, Retail Trade	284	Motor Vehicle Dealers	639	4, 6
Salesmen, Retail Trade	284	Hshld Appliance, TV & Radio Stores	668	4, 6, 2
Salesmen of Services & Construction	285	Gen'l Building Contractors	067	4, 6, 1
Salesmen of Services & Construction	285	Laundry, Clean & Other Garment Serv.	779	2, 4
Bank Tellers	301	Banking	707	3
Billing Clerks	303	No Industry Specified	---	3
Bookkeepers	305	No Industry Specified	---	3
Bookkeepers	305	Agriculture Production	017	1, 3
Bookkeepers	305	Not Specified Construction	077	6, 3
Bookkeepers	305	Radio, TV & Communication Equipment	207	6, 3
Bookkeepers	305	Not Specified Mfg Industries	398	3
Bookkeepers	305	Servies Incidental to Transportation	429	3
Bookkeepers	305	Sanitary Services	478	5, 3
Bookkeepers	305	Motor Vehilces & Equipment	507	6, 3
Bookkeepers	305	Hardware & Farm Equipment Stores	608	1, 3
Bookkeepers	305	Grocery Stores	628	3
Bookkeepers	305	Gas Service Stations	648	3, 6
Bookkeepers	305	Hshold Appliance, TV & Radio Stores	668	3, 6
Bookkeepers	305	Farm & Garden Supply Stores	679	3, 1
Bookkeepers	305	Not Specified Retail Trade	698	3
Bookkeepers	305	Banking	707	3
Bookkeepers	305	Insurance	717	3

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Bookkeepers	305	Acct, Audit & Bookkeeping Services	889	3
Bookkeepers	305	No Industry Specified	---	3
Bookkeepers	305	No Industry Specified	---	3
Cashiers	310	Dept & Mail Order Establishments	609	3
Cashiers	310	Grocery stores	628	3
Cashiers	310	Drug Stores	677	3
Clerical Supervisors, NEC	312	Nonprofit Membership Proganizations	887	3
Clerical Supervisors, NEC	312	Local Public Administration	937	3
Clerical Supervisors, NEC	312	No Industry Specified	---	3
Collectors, Bill & Account	313	Banking	707	3
Counter Clerks, Except Food	314	Hotels & Motels	777	3, 4
Counter Clerks, Except Food	314	Laundry, Clean & Other Garment Serv.	779	3, 4
Dispatchers & Starters, Vehicle	315	Meat Products	268	3, 4
Estimators & Investigators, NEC	321	Gen'l Building Contractors	067	6, 7, 1
Estimators & Investigators, NEC	321	Special Trade Contractors	069	6, 7
Estimators & Investigators, NEC	321	Not Specified Construction	077	6, 7
Estimators & Investigators, NEC	321	Farm Machin & Equipment	178	1, 6
Estimators & Investigators, NEC	321	Printing & Publ., Except Newspaper	339	6
Estimators & Investigators, NEC	321	Credit Agencies	708	4
File Clerks	325	No Industry Specified	---	3
Insurance Adjustors, Examiners & Invest	326	Insurance	717	4, 9
Insurance Adjustors, Examiners & Invest	326	State Public Administration	927	9
Library Attendants & Assistants	330	Libraries	859	3, 9
Library Attendants & Assistants	330	No Industry Specified	---	3, 9
Mail Carriers, Post Office	331	Postal Service	907	9
Bookkeeping & Billing Machine Operator	341	No Industry Specified	---	3
Bookkeeping & Billing Machine Operator	341	Banking	707	3
Computer & Peripheral Equip Operators	343	Electronic Computing Equipment	189	3
Computer & Peripheral Equip Operators	343	Trucking Service	417	3
Computer & Peripheral Equip Operators	343	Grocery Stores	628	3
Computer & Peripheral Equip Operators	343	Banking	707	3
Computer & Peripheral Equip Operators	343	No Industry Specified	---	3
Keypunch Operators	345	Metal Mining	047	3
Keypunch Operators	345	Glass & Glass Products	119	3
Keypunch Operators	345	Not Specified Mfg Industries	398	3
Keypunch Operators	345	Banking	707	3
Keypunch Operators	345	Hospitals	838	3
Keypunch Operators	345	No Industry Specified	---	3
Keypunch Operators	345	No Industry Specified	---	3
Office Machine Operators, NEC	355	No Industry Specified	---	3

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OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Payroll & Timekeeping Clerks	360	Elementary & Secondary Schools	857	3
Postal Clerks	361	Postal Service	907	3
Receptionists	364	Metal Mining	047	3
Receptionists	364	Banking	707	3
Receptionists	364	Beauty Shops	787	3
Receptionists	364	Offices of Physicians	828	3
Receptionists	364	Offices of Dentists	829	3
Receptionists	364	Hospitals	838	3
Receptionists	364	Local Public Administration	937	3
Receptionists	364	No Industry Specified	---	3
Receptionists	364	No Industry Specified	---	3
Secretaries, Legal	370	Legal Services	849	3
Secretaries, Legal	370	Local Public Administration	937	3
Secretaries, Medical	371	Offices of Physicians	828	3
Secretaries, Medical	371	Hospitals	838	3
Secretaries, Medical	371	Health Services, NEC	848	3
Secretaries, NEC	372	No Industry Specified	---	3
Secretaries, NEC	372	Metal Mining	047	3
Secretaries, NEC	372	Constr & Mat'l Handling Machines	179	3
Secretaries, NEC	372	Electronic Computing Equipment	189	3
Secretaries, NEC	372	Not Specified Elec Machin, Equip/Sup	209	3
Secretaries, NEC	372	Newspaper Publishing & Printing	338	3
Secretaries, NEC	372	Not Specified Mfg Industries	398	3
Secretaries, NEC	372	Air Transportation	427	3
Secretaries, NEC	372	Farm Products - Raw Material	528	3
Secretaries, NEC	372	Lumber & Bldg Material - Retailing	607	3
Secretaries, NEC	372	Dept & Mail Order Establishment	609	3
Secretaries, NEC	372	Drug Stores	677	3
Secretaries, NEC	372	Retail Florists	689	3
Secretaries, NEC	372	Not Specified Retail Trade	698	3
Secretaries, nEC	372	Banking	707	3
Secretaries, NEC	372	Insurance	717	3
Secretaries, nEC	372	Advertising	727	3
Secretaries, NEC	372	Offices of Physicians	828	3
Secretaries, NEC	372	Offices of Dentists	829	3
Secretaries, NEC	372	Hospitals	838	3
Secretaries, NEC	372	Legal Services	849	3
Secretaries, NEC	372	Elementary & Secondary Schools	857	3
Secretaries, NEC	372	Colleges & Universities	858	3

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Secretaries, NEC	372	Religious Organizations	877	3
Secretaries, NEC	372	Welfare Services	878	3
Secretaries, NEC	372	Nonprofit Membership Organizations	887	3
Secretaries, NEC	372	State Public Administration	927	3
Secretaries, NEC	372	Local Public Administration	937	3
Secretaries, NEC	372	No Industry Specified	---	3
Secretaries, NEC	372	No Industry Specified	---	3
Statistical Clerks	375	Insurance	717	3
Statistical Clerks	375	Real Estate (Including Insurance)	718	3
Statistical Clerks	375	No Industry Specified	---	3
Stenographers	376	Insurance	717	3
Stenographers	376	State Public Administration	927	3
Stenographers	376	Local Public Administration	937	3
Stenographers	376	No Industry Specified	---	3
Stenographers	376	No Industry Specified	---	3
Stock Clerks & Storekeepers	381	Electronic Computing Equipment	189	4, 6
Stock Clerks & Storekeepers	381	Not Specified Retail Trade	698	4
Teacher Aides, Except School Monitors	382	Elementary & Secondary Schools	857	3
Teacher Aides, Except School Monitors	382	Not Specified Educational Services	868	3
Telephone Operators	385	Drug Stores	677	3
Telephone Operators	385	Hospitals	838	3
Ticket, Station & Express Agents	390	Air Transportation	427	4
Typists	391	Misc Paper & Pulp Products	329	3
Typists	391	Offices of Physicians	828	3
Typists	391	State Public Administration	927	3
Typists	391	No Industry Specified	---	3
Typists	391	No Industry Specified	---	3
Misc Clerical Workers	394	Not Specified Construction	077	3
Misc Clerical Workers	394	Farm Products - Raw Materials	528	3
Misc Clerical Workers	394	Not Specified Wholesale Trade	588	3
Misc Clerical Workers	394	Hospitals	838	3
Misc Clerical Workers	394	Welfare Services	878	3
Not Specified Clerical Workers	395	Metal Mining	047	3
Not Specified Clerical Workers	395	Aircraft & Parts	227	3
Not Specified Clerical Workers	395	Dairy Products	269	3
Not Specified Clerical Workers	395	Misc Paper & Pulp Products	329	3
Not Specified Clerical Workers	395	Not Specified Mfg Industries	398	3
Not Specified Clerical Workers	395	Air Transportation	427	3
Not Specified Clerical Workers	395	Not Specified Wholesale Trade	588	3
Not Specified Clerical Workers	395	Lumber & Bldg Material Retail	607	3

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Not Specified Clerical Workers	395	Hardware & Farm Equipment Stores	608	3
Not Specified Clerical Workers	395	Misc Gen l Merchandise Stores	627	3
Not Specified Clerical Workers	395	Apparel, Except Shoes, Stores	657	3
Not Specified Clerical Workers	395	Credit Agencies	708	3
Not Specified Clerical Workers	395	Insurance	717	3
Not Specified Clerical Workers	395	Real Estate (Including Insurance)	718	3
Not Specified Clerical Workers	395	Hotesl & Motels	777	3
Not Specified Clerical Workers	395	Offices of Physicians	828	3
Not Specified Clerical Workers	395	Health Services, NEC	848	3
Not Specified Clerical Workers	395	Acctg, Auditing & Bkcpng Services	889	3
Not Specified Clerical Workers	395	No Industry Specified	---	3
Not Specified Clerical Workers	395	No Industry Specified	---	3
Bakers	402	Retail Bakeries	637	2, 6
Brickmasons & Stonemasons	410	Not Specified Construction	077	6
Brickmasons & Stonemasons	410	No Industry Specified	---	6
Bulldozer Operators	412	Special Trade Contractors	069	6
Cabinet Makers	413	Furniture & Fixtures	118	6
Cabinet Makers	413	Furniture & Home Furnishing Stores	667	6
Carpenters	415	No Industry Specified	---	6
Carpenters	415	Metal Mining	047	6
Carpenters	415	Gen'l Building Contractors	067	6
Carpenters	415	Special Trade Contractors	069	6
Carpenters	415	Not Specified Construction	077	6
Carpenters	415	Furniture & Fixtures	118	6
Carpenters	415	No Industry Specified	---	6
Compositors & Typesetters	422	Printing & Publishing, Except Newsp.	339	6
Compositors & Typesetters	422	Nonprofit Membership Organization	887	6
Compositors & Typesetters	422	No Industry Specified	---	6
Cranemen, Derrickmen & Hoistmen	424	Gen'l Building Contractors	067	6
Cranemen, Derrickmen & Hoistmen	424	Not Specified Construction	077	6
Cranemen, Derrickmen & Hoistmen	424	RR & Railway Express Service	407	6
Cranemen, Derrickmen & Hoistmen	424	Electric Light & Power	467	6
Decorators & Window Dressers	425	No Industry Specified	---	2, 4
Decorators & Window Dressers	425	Furniture & Home Furnishing Stores	667	2, 4
Decorators & Window Dressers	425	Retail Florists	689	2, 4, 1
Decorators & Window Dressers	425	No Industry Specified	---	2, 4
Electricians	430	No Industry Specified	---	6, 7
Electricians	430	Metal Mining	047	6, 7
Electricians	430	Gen'l Building Contractors	067	6, 7
Electricians	430	Special Trade Contractors	069	6, 7

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Electricians	430	Not Specified Construction	077	6, 7
Electricians	430	Misc Mfg Industries	259	6, 7
Electricians	430	Not Specified Mfg Industries	398	6, 7
Electricians	430	RR & Railway Express Service	407	6, 7
Electricians	430	Electric Light & Power	467	6, 7
Electricians	430	Hdware, Plumb & Htg Supply	537	6, 7
Electricians	430	Computer Programming Services	739	6, 7
Electricians	430	Electric Repair Shops	758	6, 7
Electricians	430	State Public Administration	927	6, 7
Electricians	430	No Industry Specified	---	6, 7
Electricians	430	No Industry Specified	---	6, 7
Excav, Grad/Road Mach Oper, Exc Bldzr	436	Gen'l Contract, Except Building	068	6
Excav, Grad/Road Mach Oper, Exc Bldzr	436	Special Trade Contractors	069	6
Excav, Grad/Road Mach Oper, Exc Bldzr	436	Not Specified Construction	077	6
Foremen, NEC	441	Metal Mining	047	6
Foremen, NEC	441	Not Specified Construction	077	6
Foremen, NEC	441	Furniture & Fixtures	118	6
Foremen, NEC	441	Electronic Computing Equipment	189	7, 6
Foremen, NEC	441	Machin, Except Electric, NEC	197	6
Foremen, NEC	441	Household Appliances	199	2, 6
Foremen, NEC	441	Aircraft & Parts	227	6
Foremen, NEC	441	Beverage Industries	289	6, 7
Foremen, NEC	441	Pulp, Paper & Paperboard Mills	328	1, 6
Foremen, NEC	441	Printing & Publishing, Exc Newspaper	339	6
Foremen, NEC	441	Misc Chemicals	368	6
Foremen, NEC	441	Misc Plastic Products	387	6
Foremen, NEC	441	Not Specified Mfg Industries	398	6
Foremen, NEC	441	RR & Railway Express Service	407	6
Foremen, NEC	441	Air Transportation	427	6
Foremen, NEC	441	Telephone (Wire & Radio)	448	6, 7
Foremen, NEC	441	Electric Light & Power	467	6, 7
Foremen, NEC	441	Tire, Battery & Access Dealers	647	6
Foremen, NEC	441	Auto Repair & Related Services	755	6
Foremen, NEC	441	Local Public Administration	937	6
Foremen, NEC	441	No Industry Specified	---	6
Furniture & Wood Finishers	443	Misc Repair Services	759	6
Jewelers & Watchmakers	453	Jewelry Stores	687	6
Job & Die Setters, Metal	454	Fabricated Struct Metal Products	158	6
Locomotive Engineers	455	Metal Mining	047	6, 9
Locomotive Engineers	455	RR & Railway Express Service	407	6, 9

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Machinists	461	Other Primary Iron & Steel Industry	147	6
Machinists	461	Construction & Mat'l Hdlg Machines	179	6
Machinists	461	Machinery, Except Electrical, NEC	197	6
Machinists	461	Not Specified Mfg Industries	398	6
Machinists	461	RR & Railway Express Service	407	6
Machinists	461	Motor Vehicles & Equipment	507	6
Machinists	461	No Industry Specified	---	6
Air Conditioning, Htg & Refrigeration	470	Gen'l Building Contractors	067	6, 7
Air Conditioning, Htg & Refrigeration	470	Not Specified Mfg Industries	398	6, 7
Air Conditioning, Htg & Refrigeration	470	Lumber & Bldg Material, Retailing	607	6, 7
Air Conditioning, Htg & Refrigeration	470	Electrical Repair Shops	758	6, 7
Air Conditioning, Htg & Refrigeration	470	Misc Repair Shops	759	6, 7
Aircraft Mechanics & Repairmen	471	Air Transportation	427	6
Aircraft Mechanics & Repairmen	471	Auto Repair & Related Services	757	6
Automobile Body Repairmen	472	Gas Service Stations	648	6
Automobile Body Repairmen	472	Auto Repair & Related Services	757	6
Automobile Mechanics	473	No Industry Specified	---	6
Automobile Mechanics	473	Agriculture Production	017	1, 6
Automobile Mechanics	473	Metal Mining	047	6
Automobile Mechanics	473	Other Primary Iron & Steel Industry	147	6
Automobile Mechanics	473	Motor Vehicles & Equipment	219	6
Automobile Mechanics	473	Street Railways & Bus Lines	408	6
Automobile Mechanics	473	Trucking Service	417	6
Automobile Mechanics	473	Motor Vehicle Dealers	639	6
Automobile Mechanics	473	Gas Service Stations	648	6
Automobile Mechanics	473	Auto Repair & Related Services	757	6
Automobile Mechanics	473	No Industry Specified	---	6
Data Processing Machine Repairmen	475	Electronic Computing Equipment	189	6, 7
Farm Implement Mech & Repairmen	480	Machinery Equipment & Supplies	539	6, 1
Heavy Equip Mechanics, Incl Diesel	481	Metal Mining	047	6
Heavy Equip Mechanics, Incl Diesel	481	Gen'l Contractor, Except Building	068	6
Heavy Equip Mechanics, Incl Diesel	481	Metal Stamping	167	6
Heavy Equip Mechanics, Incl Diesel	481	Metalworking Machinery	187	6
Heavy Equip Mechanics, Incl Diesel	481	Scientific & Controlling Instrum	239	6
Heavy Equip Mechanics, Incl Diesel	481	Optical & Health Service supplies	247	6
Heavy Equip Mechanics, Incl Diesel	481	Trucking Service	417	6
Heavy Equip Mechanics, Incl Diesel	481	Machin Equipment & Supplies	539	6
Heavy Equip Mechanics, Incl Diesel	481	Lumber & Construction Materials	569	6
Heavy Equip Mechanics, Incl Diesel	481	Hardware & Farm Equipment Stores	608	1, 6
Heavy Equip Mechanics, Incl Diesel	481	Auto Repair & Related Services	757	6

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Heavy Equip Mechanics, Incl Diesel	481	Misc Repair Services	759	6
Heavy Equip Mechanics, Incl Diesel	481	No Industry Specified	---	6
Hshold Appliance & Access Instal/Mech	482	Household Appliance, TV & Radio Store	668	6, 7
Hshold Appliance & Access Instal/Mech	482	Aut Repair & Related Services	757	6, 7
Hshold Appliance & Access Instal/Mech	482	Electric Repair Shops	758	6, 7
Radio & TV Mechanics & Repairmen	485	Metal Mining	047	6, 7
Radio & TV Mechanics & Repairmen	485	Radio, TV & Communication Equipment	207	6, 7
Radio & TV Mechanics & Repairmen	485	Household Appliance, TV & Radio Store	668	6, 7
Radio & TV Mechanics & Repairmen	485	Electrical Repair Shops	758	6, 7
Misc Mechanics & Repairmen	492	Metal Mining	047	6, 7
Misc Mechanics & Repairmen	492	Photo Equipment & Supplies	248	6, 7
Misc Mechanics & Repairmen	492	Not Specified Mfg Industries	398	6, 7
Misc Mechanics & Repairmen	492	Misc Repair Services	759	6, 7
Misc Mechanics & Repairmen	492	Misc Entertainment & Rec Services	809	6, 7
Not Specified Mechanics & Repairmen	495	No Industry Specified	---	6, 7
Not Specified Mechanics & Repairmen	495	Not Specified Construction	077	6, 7
Not Specified Mechanics & Repairmen	495	Not Specified Mfg Industries	398	6, 7
Not Specified Mechanics & Repairmen	495	Gas Service Stations	648	6
Not Specified Mechanics & Repairmen	495	Auto Repair & Related Services	757	6, 7
Not Specified Mechanics & Repairmen	495	Electrical Repair Shops	758	6, 7
Not Specified Mechanics & Repairmen	495	Misc Repair Shops	759	6, 7
Not Specified Mechanics & Repairmen	495	No Industry Specified	---	6, 7
Not Specified Mechanics & Repairmen	495	No Industry Specified	---	6, 7
Millwrights	502	Metal Mining	047	6
Millwrights	502	Not Specified Construction	077	6
Opticians & Lens Grinders & Polishers	506	No Industry Specified	---	7
Opticians & Lens Grinders & Polishers	506	Misc Retail Stores	697	7
Opticians & Lens Grinders & Polishers	506	Offices of Health Practitioners, NEC	847	7
Printers, Construction & Maintenance	510	Special Trade Contractors	069	6
Printers, Construction & Maintenance	510	No Industry Specified	---	6
Paperhangers	512	Lumber & Bldg Material, Retailing	607	6, 2
Pattern & Model Makers, Except Paper	514	Misc Mfg Industries	259	6
Plumber & Pipe Fitter	522	Special Trade Contractors	069	6
Plumber & Pipe Fitter	522	Lumber & Bldg Material, Retailing	607	6
Plumber & Pipe Fitter	522	No Industry Specified	---	6
Power Station Operators	525	Electric Gas Utilities	468	6, 9, 7
Pressmen & Plate Printers, Printing	530	Newspaper Publishing & Printing	338	6
Pressmen & Plate Printers, Printing	530	Publishing & Printing, Exc Newspaper	339	6
Sheetmetal Workers & Tinsmiths	535	Gen'l Building Contractors	067	6
Sheetmetal Workers & Tinsmiths	535	Special Trade Contractors	069	6

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Sheetmetal Workers & Tinsmiths	535	Not Specified Construction	077	6
Sheetmetal Workers & Tinsmiths	535	Fabric Struc Metal Products	158	6
Sheetmetal Workers & Tinsmiths	535	No Industry Specified	---	6
Stationary Engineers	545	No Industry Specified	---	6
Stationary Engineers	545	Metal Mining	047	6, 7
Stationary Engineers	545	Dairy Products	269	6, 7
Stationary Engineers	545	Rubber Products	379	6, 7
Stationary Engineers	545	Electric Light & Power	467	6, 7
Stationary Engineers	545	Sanitary Services	478	6, 7
Stationary Engineers	545	Other & Not Specified Utilities	479	6, 7
Stationary Engineers	545	Real Estate (Including Insurance)	718	6, 7
Stationary Engineers	545	Hospitals	838	6, 7
Stationary Engineers	545	Elementary & Secondary Schools	857	6, 7
Stationary Engineers	545	No Industry Specified	---	6, 7
Stationary Engineers	545	No Industry Specified	---	6, 7
Telephone Installers & Repairmen	552	Telephone (Wire & Radio)	448	6, 7
Telephone Linemen & Splicers	554	Telephone (Wire & Radio)	448	6
Tool & Die Makers	561	Electronic Computing Equipment	189	6, 7
Tool & Die Makers	561	Machinery, Except Electric, NEC	197	6
Upholsterers	563	Misc Repair Services	759	2, 6
Craftsmen & Kindred Workers, NEC	575	Elementary & Secondary Schools	857	6, 7
Assemblers	602	Machinery, Except Electric, NEC	197	6
Assemblers	602	Electric Machinery, Equip & Supp, NEC	208	6
Assemblers	602	Not Spec Elec Machin, Equip & Supp	209	6
Assemblers	602	Motor Vehicles & Equipment	219	6
Assemblers	602	Not Specified Mfg Industries	398	6
Assemblers	602	No Industry Specified	---	6
Assemblers	602	No Industry Specified	---	6
Blasters & Powdermen	603	Metal Mining	047	6
Blasters & Powdermen	603	Special Trade Contractors	069	6
Checkers, Examiners & Inspect, Mfg	610	Metal Mining	047	6
Checkers, Examiners & Inspect, Mfg	610	Elec Machinery, Equip & Supp, NEC	208	6
Checkers, Examiners & Inspect, Mfg	610	Pulp, Paper & Paperboard Mills	328	6
Dressmakers & Seamstresses, Exc Fact	613	Dept & Mail Order Establishments	609	2, 6
Dressmakers & Seamstresses, Exc Fact	613	Dressmaking Shops	797	2, 6
Dressmakers & Seamstresses, Exc Fact	613	Convalescent Institutions	839	2, 6
Drillers, Earth	614	Crude Petr & Natural Gas Extractions	049	6
211 Filers, Polishers, Sanders & Buffers	621	Sawmills, Planing Mills & Mill Work	108	6
Garage Workers & Gas Station Attend	623	Metal Mining	047	6
Garage Workers & Gas Station Attend	623	Gas Service Stations	648	6

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Metal Platers	635	No Industry Specified	---	6
Mine Operatives, NEC	640	Metal Mining	047	6
Packers & Wrappers, Exc Meat & Produce	643	Auto Repair & Related Services	753	6
Photographic Process Workers	645	No Industry Specified	---	6
Sewers & Stitchers	663	Apparel & Accessories	319	2, 6
Sewers & Stitchers	663	Misc Fabricated Textile Products	327	2, 6
Welders & Flame Cutters	680	No Industry Specified	---	6
Welders & Flame Cutters	680	Metal Mining	047	6
Welders & Flame Cutters	680	Gen'l Bldg Contractors	067	6
Welders & Flame Cutters	680	Not Specified Construction	077	6
Welders & Flame Cutters	680	Fabricated Struct Metal Products	158	6
Welders & Flame Cutters	680	Misc Fabricated Metal Products	168	6
Welders & Flame Cutters	680	Elec Machin Equip & Supplies, NEC	208	6
Welders & Flame Cutters	680	Not Specified Mfg Industries	398	6
Welders & Flame Cutters	680	Motor Vehicle Dealers	639	6
Welders & Flame Cutters	680	Auto Repair & Related Services	757	6
Welders & Flame Cutters	680	Misc Repair Services	759	6
Welders & Flame Cutters	680	No Industry Specified	---	6
Machine Operatives, Misc Specified	690	Metal Mining	047	6
Machine Operatives, Misc Specified	690	Pottery & Related Products	137	6
Machine Operatives, Misc Specified	690	Not Specified Mfg Industries	398	6
Machine Operatives, Misc Specified	690	Gen'l Building Contractors	067	6
Machine Operatives, Misc Specified	690	Gen'l Contractors Except Building	068	6
Misc Operatives	694	Gen'l Contractors Except Building	068	6
Not Specified Operatives	695	Other Primary Iron & Steel Industry	147	6
Not Specified Operatives	695	Household Appliance, TV & Radio Store	668	6
Not Specified Operatives	695	No Industry Specified	---	6
Bus Drivers	703	Street Railways & Bus Lines	408	6
Deliverymen & Routemen	705	Not Specified	998	6
Motormen, Mine, Fac, Log, Camp, Etc	710	Metal Mining	047	6
Truck Drivers	715	Metal Mining	047	6
Truck Drivers	715	Trucking Service	417	6
Truck Drivers	715	No Industry Specified	---	1
Animal Caretakers, Except Farm	740	Ag Services, Except Horticulture	018	1
Animal Caretakers, Except Farm	740	Fisheries	028	1
Animal Caretakers, Except Farm	740	Farm Materials - Raw Product	528	1
Animal Caretakers, Except Farm	740	No Industry Specified	---	6
Construction Laborers, Exc Carp Help	751	Gen'l Building Contractors	067	6
Construction Laborers, Exc Carp Help	751	Gen'l Contractors, Except Building	068	6

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Construction Laborers, Exc Carp Help	751	Special Trade Contractors	069	6
Construction Laborers, Exc Carp Help	751	Not Specified Construction	077	6
Construction Laborers, Exc Carp Help	751	Business Services, NEC	748	6
Construction Laborers, Exc Carp Help	751	No Industry Specified	---	6
Freight & Material Handlers	753	Bakery Products	287	6
Freight & Material Handlers	753	Trucking Service	417	6
Gardeners & Groundskeepers, Exc Farm	755	Horticulture Services	019	1
Gardeners & Groundskeepers, Exc Farm	755	No Industry Specified	---	1
Lumbermen, Raftsmen & Woodchoppers	761	Logging	107	1
Stock Handlers	762	Hospitals	838	3, 4
Misc Laborers	780	Horticulture Services	019	1
Misc Laborers	780	Metal Mining	047	6
Misc Laborers	780	Gen'l Contractors, Except building	068	6
Farmers (Owners & Tenants)	801	No Industry Specified	---	1
Farmers (Owners & Tenants)	801	Agriculture Production	017	1
Farmers (Owners & Tenants)	801	Agric Services, Except Horticulture	018	1
Farm Managers	802	Ag Production	017	1
Farm Foremen	821	Ag Production	017	1
Farm Laborers, Wage Workers	822	Ag Production	017	1
Farm Laborers, Unpaid Family Workers	823	Ag Production	017	1
Chambermaids & Maids, Exc Priv Hshld	901	Acctg, Audit & Bookkeeping Services	889	2
Cleaners & Charwomen	902	Services to Dwellings & Other Bldgs	728	2
Janitors & Sextons	903	Dairy Products	269	6
Janitors & Sextons	903	Apparel & Accessories	319	6
Janitors & Sextons	903	Not Specified Mfg Industries	398	6
Janitors & Sextons	903	Auto Repair & Related Services	757	6
Janitors & Sextons	903	Elementary & Secondary Schools	857	6
Janitors & Sextons	903	No Industry Specified	---	6
Cooks, Except Private Households	912	No Industry Specified	---	2, 6
Cooks, Except Private Households	912	Eating & Drinking Places	669	2, 6
Cooks, Except Private Households	912	Hospitals	838	2, 6
Cooks, Except Private Households	912	Elementary & Secondary Schools	857	2, 6
Waiters	915	Eating & Drinking Places	669	2, 6
Waiters	915	No Industry Specified	---	2, 6
Food Service Work, NEC, Exc Priv Hsld	916	Hospitals	838	2
Food Service Work, NEC, Exc Priv Hsld	916	Elementary & Secondary Schools	857	2
Food Service Work, NEC, Exc Priv Hsld	916	Local Public Administration	937	2
Dental Assistants	921	Offices of Dentists	829	2
Health Aides, Except Nursing	922	No Industry Specified	---	2
Health Aides, Except Nursing	922	Offices of Physicians	828	2

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Health Aides, Except Nursing	922	Hospitals	838	5
Health Aides, Except Nursing	922	Health Services, NEC	848	5
Health Aides, Except Nursing	922	Elementary & Secondary Schools	857	5
Health Aides, Except Nursing	922	Welfare	878	5
Health Aides, Except Nursing	922	Resid Welfare Facilities	879	5
Health Aides, Except Nursing	922	Misc Professional & Related Services	897	5
Health Aides, Except Nursing	922	Local Public Administration	937	5
Health Aides, Except Nursing	922	No Industry Specified	---	5
Lay Midwives	924	Health Services, NEC	848	5
Nursing Aides, Orderlies & Attendants	925	No Industry Specified	---	5
Nursing Aides, Orderlies & Attendants	925	Hospitals	838	5
Nursing Aides, Orderlies & Attendants	925	Convalescent Institutions	839	5
Nursing Aides, Orderlies & Attendants	925	Health Services, NEC	848	5
Nursing Aides, Orderlies & Attendants	925	Colleges & Universities	858	5
Nursing Aides, Orderlies & Attendants	925	No Industry Specified	---	5
Practical Nurses	926	No Industry Specified	---	5
Practical Nurses	926	Offices of Physicians	828	5
Practical Nurses	926	Hospitals	838	5
Practical Nurses	926	Convalescent Institutions	839	5
Practical Nurses	926	No Industry Specified	---	5
Airline Stewardesses	931	Air Transportation	427	4
Attendants, Recreation & Amusement	932	No Industry Specified	---	4
Attendants, Recreation & Amusement	932	Pulp, Paper & Paperboard Mills	328	4
Attendants, Recreation & Amusement	932	Misc Entertainment & Rec Services	809	4
Attendants, Personal Service, NEC	933	No Industry Specified	---	4
Barbers	935	Barber Shops	788	6
Child Care Workers, Exc Priv Hslds	942	Lodging Places, Exc Hotel & Motel	778	2
Child Care Workers, Exc Priv Hslds	942	Hospitals	838	2
Child Care Workers, Exc Priv Hslds	942	Elementary & Secondary Schools	857	2
Child Care Workers, Exc Priv Hslds	942	Res Welfare Facilities	879	2
Child Care Workers, Exc Priv Hslds	942	No Industry Specified	---	2
Hairdressers & Cosmetologists	944	No Industry Specified	---	6
Hairdressers & Cosmetologists	944	Beauty Shops	787	6
Hairdressers & Cosmetologists	944	No Industry Specified	---	6
Housekeepers, Exc Private Households	950	Eating & Drinking Places	669	2
Housekeepers, Exc Private Households	950	Hospitals	838	2
Welfare Service Aides	954	Welfare Services	878	2
Welfare Service Aides	954	Res Welfare Facilities	879	2
Welfare Service Aides	954	No Industry Specified	---	2
Firemen, Fire Protection	961	Local Public Administration	937	6

OCCUPATION DESCRIPTION	BUREAU OF CENSUS OCCUPATIONAL CODE	INDUSTRY DESCRIPTION	BUREAU OF CENSUS INDUSTRY CODE	VOCATIONAL EDUCATION PROGRAM CODE(S)
Guards & Watchmen	962	Detective & Protective Services	747	6
Guards & Watchmen	962	No Industry Specified	---	6
Marshals & Constables	963	Federal Public Administration	917	6
Policemen & Detectives	964	RR & Railway Express Service	407	6
Policemen & Detectives	964	Detective & Protective Services	747	6
Policemen & Detectives	964	State Public Administration	927	6
Policemen & Detectives	964	Local Public Administration	937	6
Policemen & Detectives	964	No Industry Specified	---	6
Sheriffs & Bailiffs	965	Local Public Administration	937	6
Child Care Workers, Private Households	980	Private Households	769	2